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ABSTRACT

The status of minimum competency testing programs, as of June 30, 1979, is given through descriptions of 31 state programs and 20 local district programs. For each program, the following information is provided: legislative and policy history; implementation phase; goals; competencies to be tested; standards and standard setting; target groups and testing schedule; government agent responsible for test selection or development, administration, scoring and analysis; reporting audiences; implications for students and programs; provisions for special populations; staffing; funding; program evaluation; future directions; and contact person. The following state programs are described: Alabama, Arizona, California, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Oregon, Rhode Island, South Carolina, Tennessee, Utah, Vermont, and Virginia. The following district programs are described: Santa Clara County, California; Denver, Colorado; Hillsborough County, Florida; Thomas County, Georgia; Gary, Indiana; Bettendorf, Iowa; Columbus, Kansas; Fitchburg, Massachusetts; Detroit, Michigan; Lawton, Michigan; Omaha (Westside Community Schools), Nebraska; Peterborough (Contoocook Valley--ConVal), New Hampshire; Charlotte-Mecklenburg, North Carolina; Rocky River, Ohio; Portland (Parkrose), Oregon; Salem, Oregon; Houston, Texas; South Burlington, Vermont; Orange County, Virginia; and Kanawha County, West Virginia. (CP)

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NOTE TO THE READER

The materials contained in this report were prepared for the National Institute of Education (NIE), Department of Health, Education, and Welfare, under contract number (400-79-0003). This contract was awarded December 15, 1978, as the result of a competitive bidding procedure, to National Evaluation Systems, Inc. (NES), a firm that has developed and administered minimum competency tests under contract to State and local education agencies.

The purpose of this contract was to obtain previously unavailable descriptive information about minimum competency testing programs for the enlightenment of educators, researchers, and others interested in this area. Information on the consequences or impacts of these programs was not within the scope of work for this contract. However, NIE is currently planning a complementary study that will focus on program impacts.

In obtaining the descriptive information presented here, the NES project staff, during the spring of 1979, interviewed the directors of all State minimum competency testing programs and of 21 local district programs. Subsequent to these visits, NES staff developed written program descriptions, and these were sent to the program directors for verification. It is these verified program descriptions that form the basis for this report.

It should be emphasized that the information presented here provides a snapshot of the status of minimum competency testing programs as of June 30, 1979, and, owing to the dynamic nature of these programs, may not portray the programs as they are operating today.

Further, it should be emphasized that any opinions expressed in this report do not necessarily reflect NIE or HEW position or policy, and no endorsement of minimum competency testing or of any model described in this report by NIE or HEW should be inferred.

A Study of Minimum Competency Testing Programs

COMPREHENSIVE REPORT

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PREFACE

Contained in this Comprehensive Report are detailed descriptions of 31 state and 20 local district minimum competency testing programs that were visited during the course of this study of MCT programs. Each of the descriptions includes information about the program's legislative and policy history, phase of implementation, goals and purposes, competencies, standards, target groups and testing schedules, test instruments and administration, scoring and analysis, reporting and dissemination, use and implications of test results, provisions for special populations, resources and costs, evaluation, and future directions. All information is based on both documents published by the individual programs and site visit interviews with program personnel conducted by NES staff. Each of the descriptions has also been verified for accuracy by the appropriate program contact(s).

Contributors to this report include all of the site visit interviewers and a number of NES staff responsible for organizing and synthesizing information, producing draft documents, reviewing and editing the final descriptions. To be acknowledged are: Richard Allan, Mary Callahan, Chris Day, David Gere, William Gorth, Dolores Harris, Janet Ismond, Jan Johnson, Martin Karlin, Marcia Kropf, Jennifer Logan, Paula Nassif, Marcy Perkins, Polly Peterson, Paul Pinsky, Michael Priestley, Sherry Rubinstein, Peter Schriber, Claudia Sheehan, Jay Stewart, Mary Tobin, Kathy Vorwerk, Dee Waterman, and Jeanne Wormwood.

ALABAMA

Minimum competency testing in Alabama was mandated by the State in 1977 in an effort to revise the high school graduation requirements. The program is designed to help students to master basic competencies throughout their primary and secondary school years in preparation for twelfth-grade graduation. The Alabama State Board of Education plans to implement a two-tiered testing program which calls for diagnostic testing in the early and middle grades and proficiency testing at the twelfth-grade level. Diagnostic tests will be administered at the end of the third, sixth, and ninth grades; a test that will probably be required for graduation, to be known as Alabama's Competency Test, will be administered first in the spring of eleventh grade. Students who must retake it may do so in the twelfth grade.

To date, minimum standards and competencies in reading, language, and mathematics have been developed for the third, sixth, and ninth grades. In the 1978-79 school year, these competencies were piloted in seven school systems on an instructional basis; the first assessment of student performance in these seven pilot systems will be conducted in the fall of 1979. The Competency Test to be administered in the eleventh and twelfth grades, however, is still in the planning stages and is not expected to be implemented before the spring of 1980.

Major emphases in the Alabama program include periodic assessment in preparation for the graduation test, instructional remediation, and heavy involvement of both parents and educators at the local level. The State is to set certain minimum standards of required performance on the mandated competencies, but the local school districts will be reponsible for implementing the instruction and remediation aspects of the program, and for deciding whether or not local standards should be set higher than those of the State.

Legislative and Policy History

In April 1977, the State Board of Education unanimously adopted a resolution calling for the revision of high school graduation requirements in Alabama, to be accomplished by a Committee of 100, appointed by the State Superintendent of Education. The Committee's primary task was to devise a plan for developing and implementing both the instructional and evaluative components of an eleventh-grade minimum competency test designed to certify competency for graduation. No legislation has been passed which legally requires the implementation of such a program, in part because the State's educators and administrators are committed to developing the program gradually without the constraint of a legislative mandated implementation date. The program is mandated however, by the State Board of Education.

The Committee of 100, made up of 50 educators and 50 lay people (including four state legislators), is the central body responsible for the development of the program. Its members were chosen by the Superintendent's office after an exhaustive selection process. First, requests for nominations to the Committee went out to educational organizations throughout the State, such as the Alabama Congress of Parents and Teachers, the Alabama Education Association, and the Alabama Council for Administration and Supervision. Requests for nominations were also sent to superintendents, supervisors, and Department of Education personnel. Next, a list of nominees was compiled and the 100 Committee members were selected on the basis of the number of nominations which each received, profession, geographical region, race, and, where applicable, educational area of specialization (e.g., reading, writing, mathematics).

Each member of the Committee of 100 was then assigned to at least one of the following subcommittees: Executive, Public Relations, Legislative, Financial Support, and Standards, Competencies, and Assessment. A special Policy Writing Task Force, the first subcommittee of the Committee of 100 to function, held a meeting in November 1977, to draft a set of policy recommendations intended to guide the work and planning efforts of the Committee of 100 (see summary of these recommendations under "Goals and Purposes" below).

Primarily, the purpose of the Committee of 100 was to present a comprehensive plan for the implementation of a minimum competency program tied to high school graduation requirements in Alabama. The planning process included a review by the Committee members of similar programs in other states. The plan was submitted to the Board in July 1978, whereupon the Board gave approval to the Committee to design activities for further planning and implementation.

Phase of implementation. Eventually, Alabama plans to have a graduation test requirement, but it will probably not affect any class before the class of 1981. It is expected that members of the 1981 graduating class will have to pass a graduation test in reading, writing, and mathematics.

The third-, sixth-, and ninth-grade diagnostic tests, however, were piloted on an instructional basis in the 1978-79 school year and will be in place for the purposes of assessment in the fall of 1979.

Goals and Purposes

General goals. According to the Assistant Director of the Division of Instruction, the primary purpose of this program is to "guarantee that all students in Alabama will have an opportunity to get a basic education." The State Board's intention is to make quality basic education available to everyone, by establishing, with the assistance of the Committee of 100, minimum standards, competencies, and assessment methods on a statewide basis. The local school districts may also establish any additional performance criteria they consider necessary.

Specific purposes. In order of priority, the specific goals of the program are to:

(1) identify minimum competencies at several grade levels in preparation for high school graduation;

(2) make provisions for teaching these competencies in the schools;

(3) test the students to determine the degree of mastery of these competencies.

Testing will serve a diagnostic function by providing a series of checkpoints (in grades 3, 6, 9, 11) at which the State can find out whether or not a student has mastered the appropriate grade-level competencies. The State does not intend to mandate the use of tests at grades 3, 6, and 9 for promotion purposes; in fact, the State will not set a pass/fail score for these tests. Although the State does not intend these tests to be part of a "reward or punishment" system, the State recognizes that the local school districts may in fact elect to use them in that way. A passing score on the Competency Test, however, will eventually be a graduation requirement that students must satisfy before receiving a diploma in the twelfth grade.

Results of the tests will be used in the effort: to teach the state-mandated competencies by means of a "diagnostic, prescriptive method."

Competencies

Alabama's minimum competency program has been designed to emphasize the acquisition of academic or school skills at an early age, and the gradual application of those skills as life skills, in the upper grades. Consequently, the third-grade competencies are entirely school skills. At the sixth-grade level, a few competencies related to life skills are added, but in general the sixth-grade competencies are extensions of the third-grade school skills. By the ninth grade, the competencies are almost entirely related to life skills. And, although the eleventh-grade competencies have not yet been identified, they will all very likely be life skills.

In October 1977, the Committee on Standards, Assessment, and Competencies, a subcommittee of the Committee of 100, began their assigned task of devising minimum "standards" and "competencies" in the areas of reading, writing, and mathematics. *Standards* are the statements of skills at the most general level; each standard is then further defined by a set of *competencies*, which are to be measured by test items. A *competency* then, as defined by Alabama, closely resembles a behavioral objective.

The subcommittee, comprising classroom teachers, administrators, university personnel, and lay citizens, completed a first draft of the Statement of Standards and Competencies in October and, after many revisions, completed a working draft in June 1978. This draft was sent out to 27 teachers who had not been involved in the actual development of the competencies, to get their opinion about the practicality and validity of the competencies for use in the classroom. Throughout the summer of 1978, public hearings were held in each of the eight Board districts to give educators and citizens the opportunity to express their views about the Statement of Standards and Competencies and to suggest ways in which it might be improved. The goal of both the informal survey of teachers and the public hearings, was to review the competencies. If a majority of the reviewers agreed in their comments or criticisms about specific competencies, revisions were made. The data from these reviews were collected systematically, but were not subjected to formal statistical analysis.

In September 1978, the Subcommittee met once again and used the data gathered during the summer to complete its final draft. At the suggestion of the Committee of 100, the competencies were then implemented as part of a pilot program during the 1978-79 school year in seven different school districts. The intent of the pilot program was to use the Statement of Standards and Competencies as a basis for instruction. An assessment of student progress in the seven school districts, originally planned for April 1979, will take place in the fall of 1979. Data gathered from the year of pilot instruction, however, were compiled and utilized in June 1979 to aid in a further refinement of the competencies.

A complete set of the standards for grades 3, 6, and 9 appears in Table 1.

According to the Assistant Director of the Division of Instruction, the personnel of the Department of Education, and the teachers in the local districts seem to be favorably disposed to the competencies program, chiefly because they were active participants in the statewide effort to develop these competencies. As in the one-year pilot program, the competencies (i.e., basic skills) are to be integrated into the instructional "scope and sequence" of the schools.

Standards and Standard Setting

According to current plans for the third-, sixth-, and ninth-grade tests, a minimum standard or cut-off score will be determined for each competency at each grade level. The main purpose of these tests is diagnostic; therefore, mastery or non-mastery will be determined for each competency in order to provide the data required for a remediation program.

After the pilot test in the fall the State with the help of an outside consulting agency, will set standards based on a conjunctive model: each student must attain a mastery on each skill of the three areas--reading, language, and mathematics. This model is to be used for the test required for graduation. A student who fails one of the three test areas need only retake the test for that area.

At this point, very few decisions have been made regarding procedures and timelines for standard setting. The statewide standards set by the State Board may be raised to a higher level by the local school districts, but they may not be lowered.

Target Groups and Testing Schedule

Beginning in the fall of 1979, (rather than in April as originally planned) tests will be administered to all third-, sixth-, and ninth-graders in the pilot systems. These pilot systems include the cities of Andalusia, Decatur, Dothan, and Jasper, and the counties of Etowah, Pickens, and Pike.

TABLE 1

Language, Reading, and Mathematics Standards: Grades 3, 6, and 9

Language

Grade 3

I. The student will compose single sentences which are grammatically correct. (5)*

II. The student will categorize words. (1)

III. The student will organize sentences into a paragraph. (2)

IV. The student will write for the purpose of supplying necessary information. (1)

V. The student will write a thank-you note. (2)

VI. The student recognizes and writes all letters of the alphabet (lower case/capitals) and numerals (0-9). (2)

VII. The student will copy words and numerals and short sentences correctly. (1)

VIII. The student will label pictures. (1)

IX. The student will spell correctly. (1)

X. The student will punctuate correctly. (5)

XI. The student will capitalize correctly. (5)

XII. The student will proofread his work. (1)

TOTAL: 11 standards, 27 competencies

*(The number of competencies for each standard follows in parentheses.)

TABLE 1 (continued)

Grade 6

I. The student will compose sentences which are grammatically correct. (6)

II. The student will categorize words and ideas. (2)

III. The student will put information into logical order. (2)

IV. The student will write a paragraph expressing ideas clearly. (1)

V. The student will write for the purpose of supplying information. (1)

VI. The student will write a business letter. (2)

VII. The student will fill out common forms. (1)

VIII. The student will spell correctly. (2)

IX. The student will punctuate correctly. (4)

X. The student will capitalize correctly. (3)

XI. The student will write legibly. (1)

TOTALS: 11 standards, 25 competencies

Grade 9

I. The student will write various types of sentences which are grammatically correct. (3)

II. The student will arrange sentences in logical order. (3)

III. The student will write a paragraph expressing ideas clearly. (1)

IV. The student will write for the purpose of supplying information. (3)

V. The student will write personal and business letters. (2)

TABLE 1 (continued)

Grade 9 (continued)

VI. The student will fill out common forms. (1)

VII. The student will spell correctly. (1)

VIII. The student will punctuate correctly. (5)

IX. The student will capitalize correctly. (1)

X. The student will write legibly. (1)

TOTALS: 10 standards, 21 competencies

Reading

Grades 3 and 6

I. The student will acquire appropriate word recognition skills. (8 for grade 3, 5 for grade 6)

II. The student will acquire appropriate comprehension skills. (10 for grade 3, 14 for grade 6)

III. The student will acquire appropriate reference/study skills. (5 for grade 3, 5 for grade 6)

TOTALS: 3 standards, 23 competencies for grade 3
24 competencies for grade 6

Grade 9

I. The student will acquire a basic survival reading vocabulary. (3)

II. The student will determine word meaning from the way the word is used. (1)

III. The student will determine word meaning from a knowledge of word parts. (2)

IV. The student will read for information. (9)

TABLE 1 (continued)

Grade 9 (continued)

V. The student will read and follow directions/instructions. (1)

VI. The student will read and differentiate fact from opinion/fantasy. (2)

VII. The student will read for community/economic/occupational survival. (5)

TOTALS: 7 standards, 23 competencies

Mathematics

Grades 3, 6, and 9

I. The student will perform computation tasks in addition, subtraction, multiplication, and division. (3 for grade 3, 7 for grade 6, 10 for grade 9)

II. The student will perform measurement tasks utilizing both the English and metric systems. (5 for grade 3, 7 for grades 6 and 9)

III. The student will read and interpret tables, charts, graphs, maps, and scale drawings. (1 for grade 3, 3 for grade 6 and 9)

IV. The student will make estimations and approximations and will recognize reasonableness of results. (2 for grade 3, 7 for grade 6, 8 for grade 9)

V. The student will recognize geometric forms and concepts. (1 for grade 3, 3 for grades 6 and 9)

VI. The student will apply mathematics to everyday consumer situations. (4 for grade 3, 6 for grade 6, 14 for grade 9)

TOTALS: 6 standards, 16 competencies for grade 3
33 competencies for grade 6
45 competencies for grade 9

Following completion of the pilot study, census testing at grades 3, 6, and 9 will be required: it is expected that each test will be administered once a year beginning in 1979-80. Table 2 presents the approximate number of students at each grade level, both for pilot testing and for eventual statewide testing.

TABLE 2

Numbers of Students Tested

Grade Level	Number of Students	
	Pilot Systems	Statewide
3	3170	60,634
6	3080	57,961
9	3590	67,677

The Competency Test tied to graduation will eventually be administered to all students statewide, but, to date, no plans for piloting this test have been made.

Test Instruments

Development of the tests for third, sixth, and ninth grades is currently in progress. The items are to be written and/or selected by the Task Force on Testing, assisted by an outside consulting agency. These tests will be piloted in the seven pilot systems in the fall of 1979. Development of the Competency Test has not yet begun; since it will not be implemented earlier than the class of 1981, the timeline for development has not yet been established.

The state-mandated tests for grades 3, 6, and 9 will be constructed to measure each competency. Determination of mastery/nonmastery will be on a competency-by-competency basis.

For the Competency Test, items will be written or selected to measure a domain defined by the competencies. Items will then be selected for each subtest (Reading, Writing, Mathematics) to measure each competency; performance on each subtest will be determined in relation to a specific criterion (cut-off score). According to the Assistant Director of the Division of Instruction, the Competency Test will be composed of 98% multiple-choice items and 2% writing exercises (percentages indicate proportional numbers of items only, not proportional "weighting").

Test Administration

The choice of personnel to administer the tests has not been made; according to the Department, the two most feasible alternatives are the teachers themselves or an outside company. Strong arguments have been presented for both options, but the strict maintenance of test security may well become the central issue. The recommendation of the Task Force on Testing will go to the State Board for a decision before the pilot administration next fall. As of now, the State Board of Education takes the position that the Department should supervise and assist teachers to administer the tests. The test administration procedures are also to include the administration of practice exercises for the Competency Test one month before the test itself.

Scoring and Analysis

The scoring and analyses will be done either in-house by the Board or by an outside consulting agency; the State Superintendent will make this decision. Scoring by an outside agency, according to the Assistant Director of the Division of Instruction, would be much more expensive, but turn-around time would be reduced.

Currently the Board expects to produce an item-by-item analysis for each grade level with results reported by test and by competency for each student, class, grade, and school. Within each test, scores would be produced for each subarea (reading, language, and mathematics), for each standard (defined by a set of competencies), and for each competency.

Reporting/Dissemination

Reports will be disseminated to the school districts by the Board. These reports will give the results by school and by student for each student, so that teachers and administrators can use this information for the purpose of designing remediation programs. The intent of the reporting system is to help schools to incorporate the basic competencies into their curricula, in order to make sure that students acquire these competencies.

The Alabama State Board intends to involve parents in all aspects of this program, in the belief that what is taught in the schools must be reinforced at home. Once the competencies have been finally approved, these will be disseminated to all educators and parents as part of the effort to keep the public informed about the purpose of the Alabama tests. Teachers will be encouraged to share test results with the parents of their students and, depending on the success of the dissemination effort, parents may also receive results reports for their children.

During the summer of 1979, 13 area workshops will be held to aid teachers in implementing the competencies program for grades 3, 6, and 9 in their schools. These workshops will include discussion and instruction on meaning and interpretation of the test results, as well as an introduction to a record-keeping system for following student progress in grades 1-12, and for following the progress of students from grade 1 through grade 12, and for following statewide progress on specific competencies. Eventually, test results will become part of the student's record through grade 12. In the fall, results reports on the seven pilot systems will be widely publicized to meet the public need for information on this new program.

Implications of Test Results

Consequences to students. The State does not intend to establish the minimum competency program as a punishment or reward system for grades 3, 6, and 9. Test results for these grade levels will be used only for diagnostic purposes in connection with remediation programs. A passing grade on the Competency Test will probably be required for high school graduation at the end of twelfth grade: there is also the possibility, however, that the Board will make the test optional, and that those who take and pass the test will receive some sort of special credit on their records.

Consequences to programs. Program development will be the primary emphasis statewide, and an effort to prevent minimums from becoming maximums will be made by means of the proper placement and emphasis of these competencies in the scope and sequence of the instructional curriculum. The results of the program will be used in curriculum revision in staff development, and to provide leadership for school instruction. These purposes will be accomplished through a state-designed but decentralized system, operated by 12 mini-consortiums. This system will be financed by the State but will be designed to be responsive to local needs.

Provisions for Special Populations

At this time, students with learning disabilities, in which category the State places any student who has ever been in a learning disabilities program, need not take the competency tests. By July 1, 1979, after receiving the recommendations of a special committee, the State Board of Education is to issue a policy statement identifying the special populations for whom special requirements for testing and graduation may be established, and listing the alternative modes of assessment, alternative competencies, and alternative graduation certificates that may be utilized.

Program Resources and Costs

General program staffing. Thus far, all materials for the minimum competency program have been developed by the Committee of 100. The pilot program has been implemented by teachers and administrators in the pilot systems, directed and aided by the Assistant Director of the Division of Instruction and five other Division of Instruction full-time staff members, who are specialists in reading, language, and mathematics. These staff members, with the help of an outside consulting agency, have begun to gather data from the pilot systems to aid in deciding the following questions:

(1) Who will set the standards and how will they be set?

(2) Who will administer and score the tests: the State, the local districts, or outside consultants?

The five staff specialists are also members of a 42-person Task Force on Testing formed by the Steering Committee of the Committee of 100 in June 1978. The Task Force on Testing is chaired by four persons selected by the Steering Committee: the Superintendent, the Chairperson of the Committee on Competencies, the Assistant Director of the Division of Instruction, and a representative from the Board of Education. At the direction of the Steering Committee, 42 persons were selected to serve on the Task Force: 27 classroom teachers, nine testing specialists, and six members of the Subcommittee on Standards, Competencies, and Assessment. The members are divided equally among three subgroups, one each for reading, language, and mathematics.

This group, with the help of outside consultants, will be reponsible for selecting or writing the actual test items, constructing the tests, and making recommendations on how to decide the two issues listed above. Further input into the standard-setting and scoring issues will be provided by Board of Education personnel in the Division of Evaluation.

Approximate costs and funding sources. To date, the Alabama minimum competency program has cost the State approximately $100,000, which is about two-fifths of the total appropriation built into the budget. The Superintendent estimates that the cost of program implementation and annual operating costs will be $5-10,000,000. This figure includes the costs of all curriculum and test development, staff development, test administration, and program administration. There have been no unanticipated costs incurred; expenses for such items as released time for teachers, printing, and staff development had all been taken into consideration.

All funding is expected to come from the State legislature and from educational trust funds, but so far, requests for funds from the legislature have been limited to start-up costs. The budget for 1979-80 now before the legislature, includes a request for funds to continue development of the program.

Program Evaluation

Methods of program evaluation will be designed and implemented by the Program Planning and Auditing Division of the State Department, in conjunction with the Board of Education. Evaluation will focus on the issues of parent involvement in the program, the use of personnel, remediation, Title I changes, financing, and programs for different types of students.

Future Directions

At some later date which is yet unspecified, the Committee of 100 will begin to develop requirements in other areas such as social studies, arts, sciences, and physical education. These may be tied to graduation in some way, although no decisions to that effect have yet been made.

In the future, the remediation program will also be a focus of program innovations. The State expects to provide a number of options for remediation programs, but decisions will be made at the local level through "in-house team planning decisions." One strong possibility is a system by which students who need remediation will be grouped according to the skills in which they need further instruction; a teacher will then be assigned to provide remediation for that group.

The State Board of Education would also like to experiment to determine the best methods of involving parents in the Education process. Research on this issue will begin after the pilot-testing in the fall of 1979, and the Board may use a variety of approaches to inform parents of the minimum competency program and to promote their actual participation in the education of their children. "Bringing the program to the people," according to the Assistant Director of the Division of Instruction, "may be more successful than bringing the people to the program."

References

Alabama State Board of Education. 1977 Resolution, Adopted Policies of the Committee of 100, Statements of Standards and Competencies. Unpublished report, Alabama Board of Education Division of Instruction.

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ARIZONA

Arizona has a competency-based program in which student achievement in reading, writing, and computation is monitored. The program was initiated by a 1972 legislative mandate, which recognizes the autonomy of the local school districts. It was mandated that all local districts would determine performance standards in the mandated skill areas for their own students. In addition, the State Board of Education issued a policy statement which requires that the students (1) attain at least a sixth-grade competence in those skills prior to receiving the eighth-grade certificate of promotion, and (2) demonstrate an ability to read at a ninth-grade level prior to graduation from high school. The State Board policy is in addition to the regular course of study requirements for elementary schools and graduation requirements for high schools.

Legislative and Policy History

Policy history. The establishment of a competency-based program in Arizona was the legislative response to the climate of opinion which prevailed in the State in the early 1970s. Reports such as those issued by the American College Testing Program and the College Entrance Examination Board documented a steady decline in student performance levels over a period of years. In addition, informal reports from spokesmen for business and industry indicated an increasing dissatisfaction with the skill level of Arizona high school graduates who entered the labor market immediately after graduation. Although they had received high school diplomas, the graduates were considered to be seriously deficient in the basic skills required to function effectively, since they were found, in many instances, to be unable to read instructions, fill out applications, or perform simple arithmetic calculations.

Arizona educators and parents, as well as the general public, were disturbed by these reports, and in response to their concern, the legislature passed the Arizona Revised Statute (ARS) 15-102 in 1972, directing the State Board of Education to work with the local school districts in establishing a program by June 30, 1975 for the "continuous uniform evaluation" of student achievement in the basic subjects. The basic subjects, as specified by the legislation, include reading, writing, and computational skills. The legislative mandate also instructed the local school districts to establish "measurable performance objectives" in the basic subjects by the June 30, 1975 deadline.

In its turn, the Board of Education formulated and issued a policy statement which imposed the following two requirements:

(1) each student shall attain at least a sixth-grade competence in reading, computational, and written communicative skills as determined by the local district, prior to receiving the standard eighth-grade certificate of promotion;

(2) each student shall demonstrate an ability to read at the ninth-grade level of proficiency, as shall be established by the local district, prior to graduation from high school.

Both requirements were to become effective after January 1, 1976; and in both cases the State Board granted autonomy to the local districts in the matter of determining and setting the competency standards for these requirements.

Phase of implementation. There is a wide range of variation in the degree to which the local districts have complied with the directions of the legislature and the State Board. Below are compliance figures for 185 out of 195 local districts, taken from the 1978 Summary Report prepared for the legislature by the Director of the Continuous Uniform Evaluation System (CUES).

	Development	Implementation
Reading Performance Objectives	94.9%	87.2%
Writing Performance Objectives	87.2%	74.9%
Computation Performance Objectives	88.7%	82.6%

The Summary Report also gives a breakdown of the compliance figures according to the size of the local district. Local school districts with a student enrollment of more than 10,000 display 100% compliance in both the development and implementation of performance objectives; local districts with an enrollment of less than 1,000 students tend to have the lowest compliance figures.

Goals and Purposes

General goals. The State Board of Education intends every student to have an equal opportunity to learn to read and write effectively, and to master the basic computational skills.

Specific purposes. The State Board policy states that each student must attain at least a sixth-grade competency in reading, computational, and writing skills prior to receiving the standard eighth-grade certificate of promotion.

The State Board further requires that each student shall demonstrate ability to read at a ninth-grade level of proficiency prior to graduation from high school.

Competencies

The competency areas which ARS 15-102 specifies are reading, writing, and computational skills. Since each local district must establish its own "measurable performance objectives" within the context of CUES, the Department of Education has distributed to all the local districts its Suggested Guidelines for the Development and Implementation of a Continuous Uniform Evaluation System (1979, hereafter referred to as CUES Guidelines). In the CUES Guidelines, the Department suggests that each local district establish its district goals in the specified areas through procedures which include:

(1) conducting workshops to familiarize the local district staff with CUES, and to benefit from staff suggestions and participation;

(2) developing a detailed, sequenced plan for instruction in each specified competency area;

(3) developing or selecting performance objectives which derive from the sequenced instruction plan.

The Department of Education can advise the local districts on the methods they use to implement CUES; it does not, however, have the authority to require that the local districts follow its advice.

Standards and Standard Setting

The Board of Education requires that a student demonstrate at least a sixth-grade competency level in the basic subjects to receive an eighth-grade certificate of promotion. To graduate from high school, a student must demonstrate a ninth-grade level of proficiency in reading. In enforcing these two requirements, the local districts are free to set their own standards.

Target Groups and Testing Schedule

The local districts set their own schedules for testing and make their own decisions on the grade levels at which testing is to occur.

Test Instruments

The CUES Guidelines discussion of testing makes a strong case for the use of criterion-referenced test instruments by local districts, since these tests can assess student achievement of particular objectives, permit student evaluation to take place on a continuous basis, and allow for flexibility and variety in the testing arrangements. The Department functions in an advisory capacity with respect to the local district choice of testing instruments; all decisions, however, are left to the local school district.

Test Administration

All decisions about test administration are left to the discretion of each local district. There are no State guidelines on this subject.

Scoring and Analysis

There is no discussion in the CUES Guidelines on the scoring and analysis of tests; all matters connected with the subject are for the local district to decide.

Reporting/Dissemination

In the CUES Guidelines the Department of Education points out that a continuous uniform evaluation system should provide for the maintenance of complete and accurate records of each student's achievement of the performance requirements throughout the student's educational career. If the student should transfer to another school within the system, the student's record should follow him.

The Department also describes the elements of a parent reporting system, and lists diverse methods of keeping parents informed about the program and about an individual student's progress. These methods include written reports, parent conferences, and orientation sessions for parents at the beginning of each school year. The Department has no power to enforce its recommendations.

On the subject of disseminating information about CUES results to any larger audience, there are no Department suggestions.

Provisions for Special Populations

The governing board of each school district is to be responsible for developing a course of study and graduation requirements for all children placed in special education programs in accordance with R 7-2-401 et seq. Students placed in special education classes K-12 are eligible to receive the standard certificate of promotion or a high school diploma without meeting State competency requirements, but reference to special education placement will be placed on the students' transcript or permanent file.

Special provisions have been made for limited English-speaking students. Learning to read English may be facilitated for these students by first teaching them to read in their native language. Materials for this purpose are to be provided for limited English-speaking students who come from linguistic or cultural groups that make up a significant minority in Arizona's population.

It should also be noted that the Department of Education, in the CUES Guidelines, points out that an alternative learning plan may sometimes be more appropriate to a particular student's needs and abilities. When a local district develops such a plan, the Department recommends that the local district specify clearly which decisions required by the alternative learning plan are to be left to the administration, and which to the classroom teacher.

Use and Implications of Test Results

Consequences to students. The Board of Education policy states that each student must attain a sixth-grade competency level in reading, writing, and computational skills in order to receive the standard eighth-grade certificate of promotion; moreover, each must demonstrate the ability to read at the ninth-grade level of proficiency prior to high school graduation. The most important feature of the Arizona program, however, is that the interpretation and implementation of Board policies is entirely in the hands of the local districts.

Consequences to programs. There are no mandated consequences to programs as a result of the legislation. According to the Department of Education, local districts are attempting to develop timely and appropriate remedial programs. In Phoenix, for example, procedural manuals which have been developed for dealing with special needs and/or learning difficulties of students state that each student must be given a program of instruction designed to meet his/her specific needs.

Program Resources and Costs

Approximate costs and funding sources. No up-to-date information is available as to costs. The State provided $400,000--$200,000 in 1976 and $200,000 in 1977--to the local districts for CUES but has not allocated monies for the program since then.

Program Evaluation

No formal evaluation of the program has been conducted. Some local districts have been satisfied with their efforts, and claim that standards have risen, and that a general tightening up of the educational program has occurred.

Future Directions

A statewide conference on CUES was held in June 1979 in order for districts to share their experiences in implementing CUES and to make recommendations for its improvement. Out of the conference came expressed concerns for developing:

(1) CUES Workshops for similar size districts;

(2) instructional materials for specific skill areas;

(3) replicable CUES for districts of similar size, with similar problems, projects, and constituencies;

(4) more information on CUES at the high school level;

(5) resource information to list available specialists, speakers, suppliers, and support services;

(6) alternative learning plans; and

(7) applicable plans that encompass the needs of all students.

(SDE, 1979b)

References

Arizona, State Department of Education. Suggested Guidelines for the Development and Implementation of a Continuous Uniform Evaluation System. Phoenix, Arizona: Author, 1979a.

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CALIFORNIA

In California, a State law, which was enacted in September 1976, became effective on January 1, 1977, and was amended a year later, requires that each district in the State develop proficiency assessment procedures. The law places the sole responsibility for the design and implementation of the proficiency assessment procedures on the governing board of each school district. After June 1980, no diploma may be issued to a person in the State of California who has not met the "standards of proficiency" of the district in which the person is enrolled. The State Board of Education and the State Department of Education are required to provide guidance and technical assistance to the local districts but are not permitted to establish either a statewide set of standards of proficiency or a statewide examination program.

The local districts must assess each student's performance in "reading comprehension, writing, and computation skills," although other skills may be included as part of the standards of proficiency. Each of the three skill areas must be assessed four times during the student's educational program to ensure that the student is making reasonable progress toward the "standards of proficiency" that are required for high school graduation. Specifically, students must be assessed once in grades 4-6, once in grades 7-9, and twice in grades 10 and 11. The local districts are responsible for establishing the specific schedule of testing within these grade spans.

At each stage of the testing process, students who are not able to meet the required level of proficiency must be provided with remedial instruction. Each district is required to hold a conference including the principal (or the principal's designee), the parent, a teacher familiar with the student, and the student to describe the student's progress and the remedial program planned for the student. The Department has prepared guidelines to provide information to the local districts in their design of proficiency assessment programs with its associated remediation. Special provisions of the law and the Department's guidelines address the issues of minority, limited English-speaking, special education, and migrant students.

Legislative and Policy History

Policy history. The initial legislation requiring proficiency assessment was drafted by Gary K. Hart, Assemblyman, 35th District of California.* It was enacted in September 1976, as Assembly Bill 3408 (Chapter 856, Statutes of 1976), and became effective on January 1, 1977. Assembly Bill 3408 specified that high school districts (those maintaining only schools with grades 9-12) and unified school districts (those maintaining elementary, junior high, and senior high schools) are required to: (1) establish standards of proficiency in reading comprehension, writing, and computation for the district; (2) assess the performance of students in grades 7-11 on a prescribed schedule.

On September 17, 1977, the California legislature enacted Assembly Bill 65 (Chapter 894, Statutes of 1977), which extended the requirement for the definition of proficiency requirements from secondary grades to elementary school grades and required the assessment of student performance in grades 4-6. A basic provision of the original legislation, however, was maintained, i.e., that the sole responsibility for establishing standards of proficiency and assessing students resided with the local school districts.

In 1978 the enactment of Assembly Bill 2043 (Chapter 893, Statutes of 1978) made further changes in the State requirements for proficiency assessment and dealt with the power of the local school districts to set differential standards of proficiency for "pupils with diagnosed learning disabilities." The provisions of this act substantially clarified the processes which the local districts may use if they choose to establish differential standards of proficiency.

In summary, Assembly Bill 3408 initiated the establishment of proficiency standards and their assessment in grades 7-12. Next, Assembly Bill 65 extended the proficiency standards to the 4-6 grade levels. Finally, Assembly Bill 2043 clarified the application of standards of proficiency in the assessment of students with learning disabilities.

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*California has a separate examination which can be taken by persons who are 16 years old or older, if they have completed a year of the tenth grade or will have completed a year of tenth grade at the end of the semester in which the regular test date occurs (CSDE, 1978). Each person who passes the test will be awarded a certificate of proficiency and will be permitted to exit from school. This program is called the California High School Proficiency Examination (CHSPE). It should not be confused with the proficiency assessment requirements.

Phase of implementation. The legislation specifies a definite schedule for the implementation of requirements by the local districts and for the technical assistance which the Department must give to these districts. Assembly Bill 3408 requires that by June 1978 standards of proficiency in basic skills for school districts maintaining a junior or senior high school be established. Similarly, Assembly Bill 65 requires school districts maintaining grades 6-8, or the equivalent, to adopt by June 1979 standards of proficiency in basic skills for students in those grades. Assembly Bill 3408 specifies that, after June 1980, no student will receive a diploma of graduation from high school without meeting the standards of proficiency specified by his or her district. To articulate standards of proficiency between elementary schools and their associated high schools, Assembly Bill 65 requires that representatives of high school and elementary school districts meet prior to June 1, 1979 to plan this articulation and to continue meeting until the articulation process has been completed. With respect to the technical assistance to be provided by the State Department of Education, the Department must: (1) by April 1, 1977, distribute, to each school district maintaining a junior high or high school, examples of minimum academic standards for graduation, including performance indicators; (2) by February 1, 1978 distribute, to each school district maintaining a junior or senior high school, a "framework for assessing pupil proficiency." By February 1, 1979, the same or similar framework must be distributed to every elementary school.

Associated litigation. To date, no litigation has been filed against local school districts or the State Board of Education concerning State proficiency assessment requirements. However, in its effort to provide local districts with the best possible technical assistance, the Department has developed an appendix to its *Technical Assistance Guide for Proficiency Testing* (hereafter referred to as the *Guide*). Appendix K of the *Guide*, entitled "Developing Proficiency Programs in California Public Schools: Some Legal Implications and a Suggested Implementation Procedure," constitutes a form of "preventive" legal advice. It points out a series of issues which may give rise to legal problems in the competency testing programs, including:

(1) the potential for racial and linguistic discrimination;

(2) inadequate advance notice and phase-in prior to the initial use of the tests as a graduation requirement;

(3) possible lack of psychometric validity or reliability of the tests;

(4) inadequate match between the instructional program and the test;

(5) inadequate remedial instruction that creates or reinforces tracking;

(6) unfair apportionment of responsibility between students and educators for test failures.

These issues are discussed and a suggested strategy for the implementation of proficiency assessment in two phases is suggested. Phase I emphasizes linking proficiency testing to the existing school curriculum and instructional program, and Phase II presents the possibility of extending the proficiency exam to new areas, with associated curriculum changes. Appendix K also speaks to issues of community involvement and the validity of the assessment instruments.

Goals and Purposes

General goals. As stated in the provisions of the Education Code of the State of California which resulted from Assembly Bill 3408, as modified by Assembly Bill 65, "it is the intent of the legislature that pupils attending public schools in California acquire the knowledge, skills, and confidence required to function effectively in contemporary society." The rationale for the legislation is based on the findings, stated in the bill, that: (1) high school graduation requirements are generally related to "seat time" and tied to college entrance requirements; (2) some pupils currently graduating from the public schools lack competence in essential communication and computation skills, and the confidence that they can cope successfully with a complex society.

Specific purposes. The legislature has stated five specific purposes for adopting proficiency assessment requirements:

(1) to ensure the development of clearly defined proficiency standards in basic communication and computation skills for pupils attending public schools;

(2) to ensure early identification of pupils lacking competence in basic skills;

(3) to provide appropriate assistance to pupils who lack competence so that they may achieve mastery of such skills prior to high school graduation;

(4) to provide students with opportunities to use community education resources;

(5) to develop and demonstrate their abilities in a variety of educational settings (CSDE, 1977, p. I-8).

California has mandated that proficiency assessment be a local district responsibility. The Department furnishes only technical assistance and training and has no direct compliance monitoring responsibilities for the local programs. Consequently each of the following these sections can provide only a description of the requirements of the legislation and the suggested guidelines prepared by the Department for local school districts.

Competencies

In California, the State legislature has labeled competencies "proficiency standards." Legislation requires that proficiency standards be defined for grades 4-6, 7-9, 10 and 11. Defining these competencies is left to the local school district, subject to the restrictions that "such standards shall include, but need not be limited to, reading comprehension, writing, and computation skills, in the English language, necessary to success in school and life experiences, and shall be such as will enable individual achievement to be ascertained and evaluated. Differential standards and assessment procedures may be adopted for students with diagnosed learning disabilities" (Assembly Bill 65 cited in CSDE, 1977, p. I-3).

The structure of the proficiencies from grades 4-12 is also not mandated, and considerable local discretion can be exercised in designing a structure for these proficiency standards. One requirement placed upon districts is that "governing boards maintaining elementary or junior high schools located within a school district maintaining a high school shall adopt standards of proficiency in basic skills which are articulated with those standards adopted by the school district maintaining the high school" (CSDE, 1977, p. I-4). However, the Department does not have explicit monitoring responsibilities for ensuring that such articulation occurs.

Two additional aspects of the definition of the proficiency standards should be highlighted. First, English must be the language both for the statement of proficiency standards and for the achievement tests required for high school graduation. (Provisions for limited English-speaking students will be described later.) Second, the legislation allows opportunities for individual school districts to develop differential standards and assessment procedures for students whom they have diagnosed as having learning disabilities. The procedures for defining and establishing differential standards were legislated in more detail in Assembly Bill 2043 and are described in Appendix L of the *Technical Assistance Guide*.

The final requirement of the legislation is that a "standard of proficiency shall be adopted by the governing board of local school districts with the active involvement of parents broadly reflective of the socioeconomic composition of the district, administrators, teachers, counselors, and, with respect to standards in secondary schools, pupils" (Assembly Bill 65 cited in CSDE, 1977). Although the legislation does not detail the specific process that local districts must utilize to meet this requirement, the *Guide* includes a section, entitled "Initiating Community Involvement" which sets out the issues that must be addressed in order to obtain "active involvement" of the community. A basic principle of the Department is "that the public schools belong to the people. A decision as critical as determining graduation requirements, including proficiency standards, needs community involvement to insure acceptance and support" (CSDE, 1977, p. III-6). Therefore, the local district should make a concerted effort throughout the process to involve the community by means of advisory committees, questionnaires, and the like (see Appendix H of CSDE, 1977), and should increase community awareness through meetings, news releases, and other information dissemination techniques.

To supplement the legislated requirements associated with defining competencies the *Guide* offers additional suggestions for the development of competencies which may be followed at the discretion of the local districts. The Department presents three strategies for relating the proficiency assessment to specific courses:

(1) proficiency assessment may be designed to fit the course of study;

(2) the course of study may be designed to fit the proficiency assessment;

(3) the course of study and the proficiency assessment may be combined.

Because of the potential for litigation, the Department suggests that strategy (1) or (3) be used in the initial stages of the implementation of the proficiency assessment program and that any substantial changes in the course of study be incorporated only after sufficient public information and an adequate phase-in period have been provided (CSDE, 1977, Appendix K).

In compliance with the legislative requirement that it "prepare and distribute the framework for assessing pupil proficiencies," the Department includes in its *Guide* a set of sample performance statements and associated test questions. Several hundred performance statements are provided, but these are designed to be samples only and not a state-required curriculum or associated state-required assessment tool.

Specifically, the Department has organized the sample performance statements into three major areas corresponding to different approaches or models for defining a competency and measuring it. These are:

(1) School context model--the model relies on existing school courses as a source of the content for performance statements and assessment instruments. Therefore, the content is closely related to courses in reading, written expression, and mathematics, and reflects the discrete skills traditionally taught in these courses. These skills and samples of related performance standards are listed in Table 1.

(2) Functional transfer model--the model assesses whether students can transfer learning from the classroom to actual or simulated life situations but assesses proficiencies in a school setting. Two or more skills, in other words, may be tested simultaneously on "tasks" involving charts, maps, stories, measurement scales, etc. The *Guide* provides sample items structured around these tasks.

(3) Applied performance model--the model defines proficiencies and measures them in the most direct means possible, usually involving community resources and content. The *Guide* suggests three modes of applied performance tests: the highly structured mode, the semistructured mode, and the open-structured mode. In a highly structured applied performance test a student might be asked to answer various questions about purchasing a car using resource materials such as the *Consumer Reports Buying Guide*. An example of a semistructured applied performance test based on the task of buying a car would require a student to go into the community to gather the resource materials and information

TABLE 1

Subcontent Areas of Reading, Written Expression, and Mathematics and Samples of Performance Standards in the School Context Model

Reading

1.0 Structural Analysis (6 skills)

2.0 Vocabulary (6 skills)

3.0 Comprehension (8 skills)
e.g., Skill 3.2: Identifying specific details from two or three sentences within a passage.

Written Expression

1.0 Sentence Recognition (3 skills)

2.0 Sentence Manipulation (2 skills)

3.0 Punctuation (4 skills)

4.0 Capitalization (1 skill)

5.0 Paragraph Development (3 skills)
e.g., Skill 5.2: Recognizing inconsistent verb tense within a paragraph.

6.0 Word Forms (1 skill)

7.0 Language Choices (2 skills)

8.0 Spelling (10 skills)
e.g., Skill 8.3: Recognizing that the *f* sound is spelled *ph* after an *s* and *gh* or *ff* after a short vowel.

Mathematics

1.0 Knowledge of Arithmetic Facts (8 skills)

2.0 Arithmetic Computation (21 skills)

3.0 Arithmetic Comprehension (7 skills)
e.g., Skill 3.6: Recognizing and extending number patterns.

4.0 Arithmetic Applications (15 skills)

5.0 Expressions, Equations, and Formulas (12 skills)

6.0 Intuitive Geometry (7 skills)

7.0 Measurement (9 skills)
e.g., Skill 7.3: Converting within U.S. Customary and Standard International Metric System of Measurement.

8.0 Interpreting Data from Tables and Graphs (8 skills) needed to come to a sound decision and to defend the decision made. An open-structured approach to the same task would consist of asking a student to document the steps involved in making the wisest decision.

By offering three models and a substantial number of sample performance statements and test items associated with each of the three models, the Department has given schools the opportunity to select appropriate materials for their local situations. Examples of performance standards are provided in Table 1.

Standards and Standard Setting

By law, each school district, during its development of proficiency assessment procedures, must establish standards which do not compare one student with another. Rather, standards must be based upon the skills and required of all students, with the exception of those with diagnosed learning disabilities.

Therefore, in its *Guide* the Department provides general information about the development of these standards and stresses that each district must develop standards that "reflect the concerns of various audiences" who will be affected by the results of the assessment program. Accordingly, the Department recommends that not only educators, but also students, parents, and other members of the community be involved in the development of the proficiency standards.

Because of the complexity and technical nature of this process, the Department, in conjunction with an outside contractor, is developing a set of training materials and procedures to assist California educators in standard setting. These materials will include detailed alternatives for use by districts.

Target Groups and Testing Schedule

The legislation provides broad parameters for the assessment of students, but requires that local districts determine the details of the testing schedule. The parameters are that testing must occur at least four times during every student's educational career in the following time frame: once in grades 4-6, once in grades 7-9, twice in grades 10 and 11. Students who have met the standards of proficiency for high school graduation at any point during this process do not have to be tested again. Individual students who do not meet proficiency standards at each level must be provided with remedial programs.

The purpose of the testing schedule is to ensure that individual pupils are making satisfactory progress toward proficiency in basic skills. The intention is to provide educators with an early warning of a student's potential problems. The legislation and the Department place sustained emphasis on early identification and associated remediation because proficiency assessment is viewed as a total process of assessment, counseling, instruction, and reassessment, of which the testing and standard setting are only parts.

Design and implementation of each of the program elements treated in the following four sections are the sole responsiblity of the local school district. The Department provides technical assistance in the form of materials, workshops, and responses to individual questions, but is not responsible for regulation or compliance with any specifications. Therefore, the discussion which follows centers on the technical advice which the Department gives to local school districts and does not necessarily reflect the specific strategies selected by local districts in establishing proficiency assessment procedures.

Test Instruments

The local districts have the sole responsiblity for designing, producing, and implementing proficiency assessment instruments. Each school district may develop or select the instrument which it deems appropriate. The Department of Education has no direct authority to monitor the quality and appropriateness of these instruments, even though it provides technical assistance and advice to local districts to support their test development activities.

The primary materials provided by the Department are the *Technical Assistance Guide* and the volume entitled *Sample Assessment Excercise Manual for Prcficiency Assessment* (CSDE, 1978) which contains about 1,200 test items and field-test data. The Department also provided 30 regional workshops for approximately 2,500 administrators, teachers, and school board members following the release of the *Guide*. Similar regional workshops were presented at 14 sites for district staffs following the release of the *Sample Assessment Exercise Manual*.

The *Guide* and its appendices bring forward a variety of issues associated with assessment instrument development and provide guidelines for all aspects of test development. These guidelines include: (1) consideration of the three approaches to generating assessment items, described earlier; (2) consideration of the special problems associated with the assessment of non- or limited English-speaking students; (3) procedures for selecting, as opposed to developing, assessment instruments; (4) procedures for reviewing and pretesting assessment instruments. In addition to covering psychometric issues in the development of achievement measurement instruments, the *Guide* also examines the concerns associated with racial and linguistic discrimination and the match between instructional programs and the tests.

With respect to test bias, the Department, in Appendix M of the *Guide* presents a thorough discussion of the development of test items which minimize bias, and of the implementation of an unbiased testing program. The appendix lists 12 steps which can be taken to minimize bias and maximize fairness; it also discusses issues in test administration such as providing adequate notice to parents and students about graduation requirements.

Concerning the issue of "inadequate match between the instructional program and the tests," the *Guide* emphasizes that a test must have three types of validity: (1) content validity, as defined by the American Psychological Association in its standards for educational and psychological tests (i.e., the degree to which test items represent the performance domain they are designed to measure); (2) curriculum validity, defined as "a measure of how well test items represent the objectives of the curriculum"; and (3) instructional validity, defined as the measure of how well the "objectives are translated into topics actually taught in the classrooms." It is clear that the chain of relationships from the test items to a performance domain, from a performance domain to curriculum objectives, and from curriculum objectives to classroom instruction must all be dealt with in the development of proficiency assessment instruments. (See Appendix K of the *Guide* for an explicit discussion of this issue.)

Test Administration

All test administration is the sole responsibility of local districts. Local districts are free to establish their own procedures for coordinating test administration, for utilizing their own personnel and internal resources, or for acquiring test administration services from outside the district. The Department, however, does make detailed suggestions to the local districts on how to facilitate test administration. These suggestions take up relatively simple matters of management, such as how to present clear and adequate information to the students about the time, date, and place of assessment, as well as more complex issues, such as how to minimize student anxiety during the testing process.

Scoring and Analysis

Districts are responsible for all scoring and analysis associated with proficiency testing; the State provides no additional funds to districts for this procedure.

In its *Guide*, the Department, however, suggests several types of analyses which may help a district to make use of the proficiency examination information. These analyses, presented in Appendix E, include:

(1) student progress charts;
(2) individual student mastery reports;
(3) item analyses reports; and
(4) objective matrix reports.

Reporting/Dissemination

The reporting and dissemination activities are entirely the responsibility of local districts; however, legislation dictates the specific nature of the reports made to students who fail and to their parents or guardians. The Department suggests strategies for reporting results to the local school district governing boards, to the public through various news media, and to educators in the district. A comprehensive plan for the types of information to be reported and kept on record is provided in the *Guide*.

The specific legislative requirements for reporting results to students who fail the proficiency requirements, as well as to their parents or guardians, are as follows:

(1) In the case of any pupil who does not demonstrate sufficient progress towards mastery of basic skills so that he/she will be able to meet prescribed standards upon exit from the sixth, eighth or twelfth grade, whichever is appropriate, the principal shall arrange a conference among the principal or the principal's designee, the parent or guardian of the pupil, and a teacher familiar with the pupil's progress to discuss the results of the individual pupil assessment and recommend actions to further the pupil's progress.

(2) The pupil and the parent or guardian shall be requested in writing to attend the conference.

(3) At the conference the principal or the principal's designee shall describe the instructional program which shall be provided to assist the pupil to master basic skills. If the parent or guardian does not attend the conference, the principal or the principal's designee shall communicate such information by other means within ten days of the date of the conference (Assembly Bill 65 cited in CSDE, 1977, p. I-6).

The State provides all the funds necessary to reimburse the local districts for the notification which the legislation requires when a student does not meet proficiency standards. This single fact emphasizes the legislation's intent to ensure that everyone affected by a student failure--educators, the student, and the student's parent or guardian--will communicate and participate in the design of a remedial program for that student.

In Appendix F of the *Guide*, the Department has provided "a sample form for recording information on the proficiency assessment conferences" required by the legislation.

The Department also recommends that local districts regularly report their program results with accompanying explanatory materials to governing board members in order to assist them in establishing policies that will result in higher quality education. Further, to ensure that the public will receive adequate information, the Department offers the schools a strategy for supplying the news media with both background information and detailed results of the performance assessment in the form of "background information and sample news releases for the media" (Appendix G of the *Guide*). The Department advocates furnishing complete and accurate information so the media can make their own choice as to what information they will convey to their audiences.

Use and Implications of Assessment Results

Consequences to students. The proficiency assessment program affects students in two ways. First, during grades 4-11, students are monitored to determine whether their progress toward proficiency standards is satisfactory. If their progress is not satisfactory, students must be remediated. The remedial programs become a part of the pupils' educational programs and are designed to increase the probability that students will meet the proficiency standards in the future.

Second, students must pass the proficiency standards necessary for graduation. These standards may be met early by some students; a student who does not pass the proficiency standards by the eleventh grade, must be given remedial training and an opportunity to take the test again. If the student still does not pass the proficiency examination, that student will not receive a diploma of graduation from high school.

Consequences to programs. Legislation requires that local districts establish remedial programs for students to help them meet the standards explicitly defined for the proficiency assessment program. Local districts are not obliged to make changes in goals to meet any prescribed statewide set of competencies or standards of proficiency. However, the Department, in its *Guide*, encourages districts, through the active involvement of the community and the educational staff, to reconsider their current proficiencies and discuss the advisability of modifying them. The issue of staff development is now of major concern, since the Department has become increasingly aware of the pivotal role which the educational staff must play in the effort to define proficiencies and develop remedial programs.

Provisions for Special Populations

Assembly Bill 3408, Assembly Bill 65, and Assembly Bill 2043 authorize special provisions for: (1) students with diagnosed learning disabilities; and (2) non- and limited English-speaking students.

The Department offers suggestions for dealing with these populations, and also discusses migrant students, adult basic education students, and students from differing ethnic or cultural backgrounds.

Assembly Bill 2043, which changes and clarifies statements in Assembly Bill 3408 and Assembly Bill 65 in order to define the application of the proficiency assessment program to special education pupils, has as major features:

(1) the option of local school districts to set differential standards;

(2) the limitation that differential standards apply only to pupils enrolled in special education programs as defined in the State education code;

(3) a definition of "diagnosed learning handicaps or disabilities" to include pupils the district has identified as "unable to meet the district's regular proficiency standards as a result of a learning handicap or disability";

(4) the requirement that all individualized educational programs must include differential standards of proficiency if such standards are established.

The Department provides a detailed discussion of the legislative requirements and the issues associated with establishing differential standards in Appendix L of the *Guide*. These issues fall under three major headings:

A. Who is responsible for providing differential standards?
B. For whom may differential standards be written?
C. How are differential standards written?

Each issue is discussed so that the local district has a framework for its program development. The school district must first decide whether or not it will provide any form of differential standards; it should then design and define these standards for the purpose of applying them to the individual student. Guidelines for these standards are set out, but it should also be noted that the *Guide* cautions that "to best serve the low achieving pupil who is not enrolled in special education services, districts are strongly advised to begin diagnostic assessment in the early elementary grades and to provide remedial instruction as soon as possible for pupils who do not demonstrate sufficient progress towards proficiency" (CSDE, 1977, p. L-5) rather than develop a differential standard for them.

Non- and limited English-speaking students are also dealt with in Assembly Bill 65. According to this legislation, the standards for high school graduation must be met in the English language. However, "nothing . . . shall preclude any district from conducting an assessment of any pupil in English and in the native language of such pupil." Further, the legislation demonstrates an awareness of the need to communicate with the parent or guardian of the student in the language that person most easily understands. Consequently, it states explicitly that, in requesting attendance at any conference for students and their parent or guardian, the written notice should use the primary language of the parent or guardian, if possible. The legislation therefore, while emphasizing the need for graduation standards in English, gives the local school district flexibility in adding or substituting progress assessment in other languages. The Department provides further guidance to local school districts in the development and implementation of procedures of proficiency assessment for students who have limited English-speaking ability. Its *Guide* presents a discussion of the additional types of assessment which can be made before the final assessment of graduation requirements, and mentions specifically the desirability of using diagnostic instruments for "enroute assessment of pupils in the native language of the pupil."

Adult students are also affected by the proficiency assessment when they are enrolled in adult schools that grant high school diplomas. Under the requirements of Assembly Bill 65, these schools must establish proficiency requirements and must provide reasonable help and assistance to adults so that they can pass the proficiency standards and receive a diploma of graduation from high school. The advice of the Department is that any conditions of the legislation which require notification of a student's parent or guardian do not apply in the case of an adult student.

Migrant workers' children are a special concern in California. The large population of migrant families makes it necessary to develop reciprocity procedures between school districts in the measurement of proficiency standards. The problems of reciprocity in proficiency assessment are similar to those which students face in terms of reciprocity of course content between school districts. The Department has worked through regional offices and groups of school districts serving large numbers of migrant students in order to develop a fair procedure for measuring proficiency in basic skills. Specifically, the Department is working with the Parlier Unified School District "to develop a 'home high school' or 'course clearinghouse' approach to make it easier to assemble course credits migrant students have accumulated in various school districts" (CSA, 1978, p. 13). Moreover, the Department has formed a task force of educators familiar with migrant student problems to develop recommendations for school districts and for possible future legislation.

Program Resources and Costs

General program staffing. The California legislature has been the primary sponsor of the proficiency assessment program. The legislature has explicitly stated that each individual school district must design and implement its own program of proficiency assessment. Also, the legislature has explicitly given the State Board of Education and the State Department of Education the responsibility for providing various forms of technical assistance to the local school districts in the development of their proficiency assessment procedures.

The California State Department of Education, for the Board, provides this technical assistance to school districts through the Office of Program Evaluation and Research and through the Division of Secondary Education. The Office of Program Evaluation and Research has received funds for one senior and two junior professional staff members and for secretarial support, and funds have also been allocated by the legislature for outside contractual services for this purpose.

Districts are encouraged to develop individual management plans for their own proficiency assessment procedures. Although the *Guide* (CSDE, 1977, Section III) provides assistance to local districts in organizing and managing the major tasks associated with the implementation of their individual programs, staffing for each local program remains the responsibility of the local district and is not supported financially by the State.

Approximate cost. The major financial burden for the implementation of the proficiency assessment program is borne by the local districts, with the exception of a total of $224,000 allocated to reimburse districts with junior and senior high schools for the costs of parent/ guardian and pupil notification. The cost figures for the individual programs of local districts are not available from the State. However, in the enactment of legislation, the State has allocated to the Department a total of $575,000 for the cost of preparing the framework for assessing pupil proficiency and for distributing materials to secondary and elementary schools.

Funding sources. The funds appropriated in the legislation come from the General Fund of California. No additional monies are explicitly budgeted by the State for implementation and organization.

Program Evaluation

The Department has initiated an evaluation of the California proficiency assessment program. The evaluation is not a "monitoring" or "compliance" review; rather, it is designed to identify the strengths and weaknesses in the existing proficiency assessment programs. The results of this evaluation may indicate the direction of future activities for the Department and possibly for the legislature. The evaluation is in the form of a survey questionnaire mailed to a sample of districts, combined with personal interviews for a subsample of these districts. The issues considered in the evaluation include:

(1) status of adoption of standards;
(2) nature of standards--both in content and level;
(3) nature of assessment process--type of assessment instruments;
(4) costs associated with the entire proficiency assessment process;
(5) feasibility of redirecting existing resources to meet proficiency assessment costs;
(6) estimated number of students requiring special, supplementary instruction;
(7) plans and costs associated with those students who do not meet standards;
(8) anticipated procedures for meeting the needs of cultural and linguistic minority students;
(9) anticipated procedures for dealing with transient students;
(10) anticipated procedures for setting 'differential standards';
(11) attitudes towards issuing certificates of attendance;
(12) nature of articulation of standards, assessment procedures, and curriculum between elementary and secondary districts;
(13) technical assistance needs (CSA, 1978, p. 16).

The results of this evaluation will furnish a basis for management decisions about the need for additional technical assistance, and will also provide detailed information to legislative subcommittees considering the effects of proficiency assessment on education in the State.

Future Directions

The Department is developing a workshop to support the local education agencies in their development of proficiency assessment procedures. This 10-day workshop in will cover:

(1) background, legislation, and underlying issues in proficiency assessment;
(2) function and use of committees;
(3) development of item specifications;
(4) test production, field tryout and statistical concepts;
(5) test refinement and test selection;
(6) setting and interpreting passing scores;
(7) scoring writing samples;
(8) linking test results to instructional planning;
(9) assessment results in remediation and reporting; and
(10) review and summary.

It is anticipated that, in 1979-80, an in-depth study of certain aspects of the impact of the law on education in California will be undertaken. This study may consider issues such as the linkage of the assessment program to instruction, the impact of proficiency examinations on special populations of students, changes in dropout rate, and the quality of remedial programs. The study is to be designed under the direction of the Department and funded through the legislature.

Because local districts are responsible for implementing proficiency assessment, it is expected that they will implement and modify their programs as they gain experience in the assessment of pupils in basic skills, but no major shifts in the program are anticipated. The major energy of the Department is directed toward continuing to provide technical assistance to local school districts in developing and evaluating their own programs.

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SANTA CLARA COUNTY, CALIFORNIA

In California, the Hart Law, Assembly Bill (AB) 3408 was approved by the California legislature in August 1976. Subsequently, this law was incorporated into Assembly Bill 65 which represents a significant modification in the California Educational Code, for it mandates that each local school district in the State develop a proficiency assessment program in the three basic skill areas of reading, writing, and mathematics as a prerequisite for graduation from California public high schools beginning with the graduating class of 1981. Competency tests are not limited to the three mandated skills but may include other skills if the local district chooses.

The response to AB65 in Santa Clara County was the formation of the Santa Clara County AB65 Secondary Consortium made up of representatives from the 13 school districts and from the County Office of Education to develop a model minimum competency testing program for the entire county.

Legislative and Policy History

Policy history. The initial legislation for the proficiency assessment was drafted by Gary K. Hart, Assemblyman, 35th District of California. It was enacted in September 1976 as Assembly Bill 3408 and became effective January 1, 1977. Assembly Bill 3408 directed that high school districts: (1) establish standards of proficiency in reading comprehension, writing, and computation; and (2) assess the performance of students in grades 7-12 on a prescribed schedule.

Shortly after this law went into effect, the California Assembly enacted Assembly Bill 65 which amended Assembly Bill 3408. Assembly Bill 65 extended the proficiency requirement from the high school grades to the elementary school grades by requiring an assessment of student performance in grades 4-6. According to the major provisions of the law, each local district must:

(1) Adopt assessable standards of proficiency for graduation in basic skills. Standards shall include but not necessarily be limited to reading comprehension, writing, and computation.

(2) Assess pupil progress toward these standards at prescribed times--at least once between the fourth and sixth grades and the seventh and ninth grades, and at least twice between the tenth and eleventh grades.

(3) Conduct a diagnostic and prescriptive remedial instructional conference with students who do not meet the district's minimum standards.

(4) Develop and approve alternative methods for students to meet the district's minimum competencies.

(Office of the Santa Clara County Superintendent of Schools, 1978 C, p. 1)

With the enactment of Assembly Bill 2043, further changes were made in the requirements for proficiency assessment. The main features of this bill are the options granted to the local school districts for setting differential standards of proficiency for "pupils with diagnosed learning disabilities." This act clarifies the processes which local districts may use if they choose to establish differential standards of proficiency.

Phase of implementation. The legislation prescribed a schedule for implementation of the requirements of these three laws:

(1) Assembly Bill 3408 required that by June 1, 1978 standards of proficiency in basic skills be established for school districts maintaining junior or senior high schools.

(2) Assembly Bill 65 required that school districts maintaining grades 6-8 or the equivalent adopt standards of proficiency in basic skills by June 1, 1979.

(3) Assembly Bill 3408 specifies that after June 1980, no student is to receive a diploma of graduation from high school without meeting the standards of proficiency specified by the school district.

To articulate the standards of proficiency between elementary schools and high schools, Assembly Bill 65 requires representatives of the elementary districts and the high school districts to meet prior to June 1, 1979 to plan this articulation, and to continue meeting until the articulation process has been completed.

Technical assistance must be provided by the State Department of Education, also on a prescribed schedule. By April 1, 1977 the Department must:

(1) Distribute to each school district maintaining junior high or high school examples of minimum academic standards for graduation, including performance indicators.

(2) Distribute to each school district maintaining a junior or senior high school, a framework for assessing pupil proficiency. By October 1, 1978 the same or similar framework must be distributed to every elementary school.

Assembly Bill 2043 makes no changes in the earlier legislated timelines.

Goals and Purposes

The major goal of Assembly Bill 65 is to ensure through proficiency testing that "pupils attending public schools in California acquire the knowledge, skills, and confidence required to function effectively in contemporary society." Specific purposes include ensuring that basic communication and computation skills be identified and that pupils lacking these skills be provided with appropriate assistance at the earliest possible instance. For a complete listing of program goals and purposes, see National Evaluation Systems (1979).

Competencies

The purpose of the Santa Clara County Basic Skills Competency Testing Program is to determine if students in the public school system have acquired the knowledge, skills, and competence required to function effectively in contemporary society. In order to achieve this goal, the Consortium assembled an Assessment Model Package which was approved by all 11 districts. The Model Assessment Package included a set of core competencies in each of the three areas to provide a common starting point from which each district could develop its own program to implement the proficiency assessment.

TABLE 1

Santa Clara County Competencies in Mathematics, Reading, and Writing

Mathematics

Introductory statement. In satisfying the following five competencies, the student demonstrates proficiency in adding, subtracting, multiplying, and dividing whole numbers, fractions, decimals, and percent.

(1) The student can identify and use the tools and units of measurement and solve problems involving them.

(2) The student can solve consumer problems.

(3) The student can do wage and time computations.

(4) The student can use basic money management skills.

(5) The student can use numerical information presented in maps, simple graphs, and tables.

(6) The student can add, subtract, multiply and divide using whole numbers, fractions, and decimals.

Reading

(1) The student can read and understand written directions.

(2) The student can read and understand printed signs, maps, charts, and schedules.

(3) A student can read for details, context clues, order of events, and main idea.

(4) A student can read and understand a variety of forms.

TABLE 1 (continued)

(5) The student can use library resources and other reference material.

(6) The student can distinguish between fact and opinion, and extract pertinent information from written material.

(7) The student can read and understand a printed business letter and a handwritten personal letter.

Writing

(1) The student can write a paragraph or paragraphs that demonstrate proficiency in the following areas:

a. complete sentences

b. correct spelling

c. correct punctuation

d. legibility

e. purpose

f. sequence

g. clarity

(2) The student can fill out forms.

To compile the list of core competencies, each district in the Consortium first developed its own list of competencies. As mandated by Assembly Bill 65, each district involved teachers, parents, administrators, counselors, and persons from business/industry in developing its list of competencies. The Consortium brought together all the competency lists of the local districts; a task force for each subject area, comprised of teachers representative of the districts; then formulated a composite list of common competencies.

The list of competencies and the objectives that apply to each are listed in Table 1. This table is taken from attachment #5 of the Model Assessment Package.

Standards and Standard Setting

Assembly Bill 65 states that "it is the intent of the legislature that pupil assessments measure the progress of each pupil mastering basic skills rather than the pupil's performance relative to his/her classmates." (Minimum Competency Testing in the State of California, National Evaluation Systems, 1979, p. 8)

The Consortium helped each local school district to set its own standards for a passing score. The Consortium recommended that the local district gather and examine field-test data before setting its standards. The passing scores usually range from 65% to 80%. Some districts set a passing score for each competency in addition to an overall passing score (or subtest), others simply set an overall passing score.

Target Groups and Testing Schedule

Legislation requires that testing occur four times during a student's educational career: once in grades 4-6, once in grades 7-9, twice in grades 10 and 11. Students who have met the proficiency standards for high school graduation do not have to be tested again. However, students who do not meet proficiency standards at each level must have individualized remedial programs designed for them.

In Santa Clara County the frequency of testing varies among the districts. Most districts administer tests in the fall; some test both in the fall and the spring. The proficiency assessment for high school graduation is to be given in the ninth grade in the majority of districts; other districts retest all grade 11 students to measure retention of learning in the areas of the proficiency assessment.

Test Instruments

The purpose of the Santa Clara County Basic Skills Competency Testing Program is to assess pupil proficiency in the areas of reading, writing, and mathematics. The program contains three parts, one for each of the three areas. Each test contains a set of competency statements with performance indicators and test items. (A performance indicator is an objective and states the expected student behavior.) The purpose of the Santa Clara County AB65 Secondary Consortium was to develop a model assessment package that could be used by the districts of Santa Clara County to assess pupil proficiency in the areas of reading, writing, and mathematics.

The first task of the Consortium in developing an assessment package was to establish a set of core competency statements for each skill, with the cooperation of the community. Once the competencies had been agreed on, the Consortium then had to decide whether to develop its own tests or to use existing tests. After a review of existing materials, the Consortium decided to develop its own materials. The Consortium awarded a contract to Educational Program Evaluation, Inc. both to develop the performance indicators and items, student test booklets, cross-reference catalogs, and administrators manuals preparatory to field-testing, and also to refine the test subsequent to field-testing.

The Consortium worked in committees (subgroups of three and four members), meeting once or twice a month to review the materials produced by the consulting firm. The committee members, one from each district, were either assistant superintendents for instruction or directors of assessment. The county provided one full-time staff person to coordinate the committee.

In the fall of 1977 a large-scale field test of the items was conducted by the consulting company. A total of 35 test forms were used: 10 in mathematics, 10 in reading, and 15 in writing. Each form required only one 50-minute period for administration. The sampling plan was quite sophisticated. First, data were collected from all ninth- and eleventh-grade students in schools predicted to score "high" and schools expected to score "low" on the field-test material.

School districts were classified as high or low achievers based on the previous year's twelfth-grade State Assessment results. Schools were then chosen from these districts to maximize the contract (i.e., the highest schools in the "high" districts and the lowest schools in the "low" districts were selected). Another constraint was then added: in districts with more than two schools, no school was to collect data in more than one subject area.

Each school selected to participate appointed a coordinator. During a half-day training session on test administration these coordinators were given instructions in: (1) how to maintain strict security procedures; (2) the proper coding of answer sheets; (3) the distribution of materials; (4) detailed instructions for administration of the tests; and (5) the arrangement of answer sheets for scoring. Each coordinator assumed responsibility for training persons in his/her own school to administer the tests.

In order to conform to the time constraints of one class period, each subject area was divided into several test forms. The items within each subject area were divided into forms ranging in length from 3 to 43 items within a single test form. All items for a given performance indicator were kept intact within that form so that data could be analyzed by performance indicator. The test forms were packaged in sets for convenient administration in accordance with the number of forms in a given subject area. Each package contained an equal number of all the different forms in that subject area interspersed with each other. In addition, each booklet was numbered, sequentially, in order to establish a security system.

The field-test design called for the scoring of all student answer sheets by optical scanner. For the mathematics and reading tests this was a simple procedure, since all test items were multiple-choice. On the writing test, only one form contained multiple-choice items. The remaining 14 forms contained essay or short-answer items, and therefore had to be hand-scored and coded onto answer sheets as "acceptable," "unacceptable," or "omitted." These forms were scored cooperatively in two days by teachers who had been selected by each of the districts involved. One leader from each district was trained in advance of the actual scoring session and was responsible for training other leaders during the scoring sessions. A given group of leaders was responsible for scoring only one of the 14 forms.

The first level of analysis produced was for the schools. The four types of reports produced were:

(1) class or group report form;
(2) class or group exceptions list;
(3) school report form;
(4) school exceptions list.

The exceptions lists contained the names of students who had either failed to code their test forms or coded them improperly.

The next level of reports was an item analysis. For this report, all students in grades other than 9 and 11 were deleted from the file. As a result of this edit, 19,880 students remained and were used in the item analysis. The first item analysis report gave point biserial coefficient difficulty levels, and the percentage of students selecting each of the wrong options by group (grade 9, low; grade 9, high; grade 11, low; grade 11, high) for each item.

The next item analysis looked at the same information but combined high and low groups at each grade to produce an estimate of what the averages for the county might be.

A final report was produced as a guide to the analysis of data. This report was a list of items that should be looked at carefully because of: (1) low point biserial values, and (2) low difficulty levels.

The results of this initial field test were sent to schools during the spring of 1978. The data were reviewed by competency area; five or six teachers were selected to review the test items and performance indicators for each competency. It was decided to use only teachers and administrators in this review process, since the inclusion of students, parents, and representatives from business and industry would slow the process down. The Consortium coordinated the review activity and gave workshops to assist in the review. Participating teachers were released on schools days, and the districts paid for substitute teachers.

The results of the field test and review process led to the conclusion that 60% of the items needed to be revised. The revision focused on redefinition of the competencies and performance indicators by district personnel and community members. Teachers and consultants rewrote test items during the summer of 1978; field-testing took place again in the fall of 1978.

The Consortium packaged and distributed the materials to the school districts as a Model Assessment Package in December 1978. There are 250 reading items, 250 mathematic items, and 100 writing exercises in the package. In addition, the Consortium produced two sets of tests: the first is a one-period test in each area, and the other is an eight-period test across all areas. The one-period test consists of three performance indicators per competency and three items per performance indicator, while the larger package of tests covers all competencies, all performance indicators and four items per performance indicator.

The local districts are free to choose their own assessment program. A rough estimate is that one-third have chosen an outside company to do the testing; one-third have developed their own tests, using the assessment model package; and one-third have actually used the Consortium tests.

Test Administration

Each district is responsible for the administration of its own proficiency tests. Legislation does not require any specific procedures. Consequently, each district deals differently with absenteeism, practice periods, retesting, and test scheduling. The Consortium has made several suggestions to the members about administering the tests and maintaining test security. In addition, test administrators are advised to attend an instructional session before administering the test. Although they are designed to take up one 50-minute period, the tests are not timed. It is up to the test administrator to gauge the alertness and attention span of the students and plan the test accordingly.

Scoring and Analysis

The Santa Clara County Consortium currently does not provide a scoring reporting service to the 13 member districts for the proficiency assessment tests. Test scoring services are recommended by the consortium for districts that need them.

The Department of Education for the State of California suggests several types of analysis and reporting that could provide useful information to the district. However, each district is responsible for its own proficiency assessment, and information on types of analysis used is not available.

Reporting/Dissemination

The reporting and dissemination activities associated with the California proficiency assessment are the responsibility of the local districts. However, legislation dictates the specific procedure to be followed in notifying a student and his/her parent or guardian in the event of a failure to meet proficiency standards. The legislation states:

> (1) In the case of any pupil who does not demonstrate sufficient progress toward mastery of basic skills so that he/she will be able to meet prescribed standards upon exit from the sixth, eighth, or twelfth grade, whichever is appropriate, the principal shall arrange a conference among the principal or the principal's designee, the parent or guardian of the pupil, and a teacher familiar with the pupil's progress to discuss the results of the individual pupil assessment and recommend actions to further the pupil's progress.
>
> (2) The pupil and the parent or guardian shall be requested in writing to attend the conference.
>
> (3) At the conference the principal or the principal's designee shall describe the instructional program which shall be provided to assist the pupil to master basic skills. If the parent or guardian does not attend the conference, the principal or the principal's designee shall communicate such information by other means within ten days of the date of the conference. (Assembly Bill 65 cited in National Evaluation Systems, 1979, p. 3.)

Use and Implications of Test Results

Consequences to students. Students are affected in two ways by the proficiency assessment program. First, during grades 4-10 the proficiency assessment monitors student progress toward proficiency standards. If the progress of a given student is not satisfactory, legislation requires that remedial programs be designed for that student, with input from both the school and parents, to increase the probability that the student will meet proficiency standards. The Office of the Santa Clara County Superintendent of Schools, in interpreting AB65 Requirements for Alternative Means, suggests several methods of providing students with remediation in the competencies. These include the following:

(1) A competency workshop to be offered at the end of each grading period for students who have not met the competencies during that period.

(2) A summer competency program, conducted by the district at no cost to students, operated on a self-initiated and self-instructional basis, with teachers acting as tutors.

(3) Summer school programs in the basic skills of reading and mathematics for students who need further instruction.

(4) Learning resource centers in which packaged materials are available to help students meet competencies through independent study.

(5) Special classes in reading, mathematics, and other areas of study, to be established for the specific purpose of helping deficient students to meet the competency requirements.

The student is required to pass proficiency standards for graduation by grade 11. If the student does not meet proficiency standards, remedial training is provided along with the opportunity to take the test again. If the student does not meet the proficiency standards, that student is not granted a diploma of graduation from high school.

Consequences to programs. Legislation requires local districts to establish individual remedial programs for students to help them meet the standards of the proficiency assessment program. Local districts are not obligated to make changes in goals to meet any prescribed statewide set of competencies or standards of proficiency.

However, the assessment program has also had impact on curriculum development and teacher activities. In the opinion of the Director of Vocational Education and Guidance, the assessment provides useful information to both students and teachers and encourages growth from simply a competency testing program to a total competency-based system.

Provisions for Special Populations

The Santa Clara County Office of Education has formed a new Consortium this year to develop proficiency tests for special education students; this Consortium is composed of directors of special education from each of the

11 high school districts. The need for special education proficiency tests has arisen from recent legislative action which set up uniform, statewide standards and categories for designating students as learning disabled. The State law exempts these students from the competency testing program, and requires each local district to design an Individual Education Plan (IEP) for every such student. Each IEP, however, is to contain an individualized set of proficiency standards which the learning disabled students must meet.

Information is not available on the provisions for other special populations, such as migrant workers' children, students with limited English-speaking ability, or transfer students.

Program Resources and Costs

General program staffing. Assembly Bill 65 requires that a "standard of proficiency be adopted by the governing board of local school districts with the active involvement of parents, broadly reflective of the socio/economic composition of the district, administrators, teachers, counselors and with respect to standards in secondary schools, pupils" (cited in National Evaluation Systems, 1979, p. 6).

This statement agrees with the basic principle of the California State Department of Education "that the public schools belong to the people." Consequently, the local districts involved teachers, parents, administrators, and people from business/industry in the process of developing the initial set of competencies.

The Consortium has had the primary responsibility for developing and continuing to improve the Model Assessment Package. Consortium members currently meet once a month.

During the development of the Model Assessment Package, the county provided one full-time professional staff member, Director of Vocational Education and Guidance in Santa Clara County, to coordinate the activities of the Consortium. The county currently provides a half-time professional person to coordinate the Consortium activities.

Educational Program Evaluation, Inc. provided technical assistance in selecting performance indicators and items, developing student test booklets, cross-reference catalogs, and an administrators' manual preparatory to field-testing, and in refining the test subsequent to field-testing. Northwest Evaluation Association in Portland, Oregon is currently developing an item bank in cooperation with the Consortium.

Approximate costs. Cost figures for the development and administration of the assessment package and the proficiency tests are not available. Scoring costs for the three areas of the testing program range from $1.50-$10.00 per student if the tests are hand-scored and $1.20-$5.00 per student if the tests are commercially scored. The County Office of Education will spend $40,000 this year to develop computer services for the use of the local districts in the scoring, reporting, and record keeping of proficiency test data.

Funding sources. To fund the activities of the Consortium over a three-year period, each of its 13 members has contributed $7,000. The county matched this total giving the Consortium a $150,000 budget over three years. These funds were used for supplies, for hiring consultants from other school districts and states, for travel, and for field-testing. In addition to funds, staff was provided by the county and local districts.

On a continuing basis, each district presently contributes $500 a year and the county provides a half-time professional person to coordinate the activities.

Program Evaluation

Evaluation of the proficiency assessment program as a whole has been initiated by the California State Department of Education for the purpose of identifying strengths and weaknesses of the current program. However, there is no information available at this date as to the plans of the Santa Clara Consortium, or of any of its member districts, to evaluate its testing program.

Future Directions

All districts are still actively involved in the Consortium, and some local districts outside the county have also started to participate. The success of the Secondary Consortium has led to the establishment of the Santa Clara Elementary Consortium composed of the elementary school (K-8) districts. This group is now in the process of developing proficiency tests in reading, writing, and mathematics in order to comply with the AB65 requirement to assess all students in grades 4-6. This assessment would provide an early warning to those students deficient in the basic skills.

The Consortium will continue to develop and field-test new items. Two approaches are used to field-test the new items:

(1) New items were added to existing tests, but are not scored in the pass/fail decision. Thus, the data on the new items are gathered as part of the ongoing testing program. However, this method is unsuitable for use within the framework of the one-period tests because of time constraints which these tests impose. Since most districts have chosen to use the one-period tests, the opportunities are limited for field-testing new items within the context of an existing test.

(2) New items make up a separate test. This is the method by which most new items are field-tested. The Consortium now gets only 100-200 responses per item when field-testing. The initial field test involved 2,000 student responses per item, but the Consortium believes that 100-200 responses per item provides the necessary data for field-testing purposes at a much lower cost.

The primary method of generating parallel forms is to use item difficulty as determined by the field test. The Consortium, in cooperation with Northwest Evaluation Association, is experimenting with the Rasch technique as an alternative method for generating parallel forms and item banking. For the Rasch approach, however, more than 100-200 responses per item in the field test are needed. The Consortium hopes to overcome this problem by using items in the Northwest Evaluation Association item bank and by gathering data from the actual administration of the tests in local districts.

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DENVER, COLORADO

The Denver, Colorado public school system has employed minimum competency testing for over 18 years and its program is among the oldest in the country. Planning for the program began in 1958 when the Denver school system conducted a survey of 400 area business and industrial employers. The survey revealed that area employers believed that some high school graduates were not competent in basic skills.

To overcome this perceived deficiency in basic skills, a series of four tests, called collectively Proficiency and Review tests, were developed in 1960 by the school system in cooperation with the California Test Bureau (CTB). Initially designed to test students in grade 12, the proficiency tests were revised in 1968, and since then have been administered twice each year (December/April) to students beginning in grade 9, with the opportunity for additional testing in grade 10, 11, or 12 on any specific area(s) previously failed. Passing these tests, which cover minimum competencies in the areas of mathematics, spelling, language, and reading, became a prerequisite for graduation from Denver high schools in 1960.

The main purpose of the proficiency tests is to aid students to acquire basic skills. There are Braille forms of the test.

Legislative and Policy History

The Denver Superintendent of Schools and Board of Education agreed, following the business and industry survey in 1958, that competencies in basic skills should be prerequisites for graduation. At that time, the Department of Curriculum Services of the Denver Public School System convened committees of teachers and administrators to develop competencies related to the curriculum guides used in the Denver schools. With the adoption of arithmetic, reading, language, and spelling as the competency areas to be assessed by the Proficiency and Review Tests, the Department of Curriculum Services initiated the Denver Competency Testing Program. Now the Department of Development and Evaluation is responsible for all development, implementation, and maintenance activities associated with the program; there is no Colorado state-mandated testing program.

The only State action taken subsequent to the implementation of the Denver program has been Senate Bill 180, passed by the legislature in 1975. Initially, the legislature attempted, unsuccessfully, to abolish the Denver tests. As finally passed, the bill places restrictions on the local school districts that decide to develop competency testing for high school graduation: the local districts must begin testing in the ninth grade, they must offer the test at least twice a year, and they must provide remediation for students who fail. All decision-making rests with Denver's Superintendent of Schools, the Board of Education, and the Department of Development and Evaluation; it is the Department that coordinates program activities.

Phase of implementation. In 1960, the Department began administering the Proficiency and Review tests, developed by the California Test Bureau (CTB), to grade 12 students. Because some students failed one or more of the tests, remediation classes were established. A voluntary summer program was also established during the same period to provide remediation. When the tests were administered again, only 3% of the grade 12 students failed to obtain a diploma.

Two years later, after approximately the same failure rate occurred, the Board of Education decided to administer the Proficiency and Review tests in grade 11 in order to provide additional time for remediation prior to graduation.

In 1968, the Denver school system conducted a study of the impact of the Proficiency and Review tests. One objective of the study was to employ psychologists and social workers to study students who failed one or more of the tests. The Department of Development and Evaluation found that anxiety over test outcomes was a concern for some students. The Board of Education, therefore, decided to initiate the tests in grade 9, a procedure currently in effect, which overcomes the anxiety problem to some extent. No changes in policy have occurred since 1968. Although State legislation was enacted in 1975, the provisions of the bill were already in effect in the Denver school system.

Goals and Purposes

General goals. The chief goal of Proficiency and Review testing is to ascertain the students' attainment of established levels of achievement in basic educational skills.

Specific purposes. The Denver schools Proficiency and Review program is designed to ensure that high school graduates possess minimum competencies in four basic areas: arithmetic, spelling, language, and reading comprehension.

Competencies

The proficiency areas in the Denver competency testing program were first identified through the business and industrial community survey which the Denver school system conducted in 1958. Teachers and school administrators then worked in committees to formulate the competencies in relation to the prevailing curriculum guides. These committees designated, and the Board of Education adopted, four skill areas to be tested: Numerical Proficiency, Spelling Proficiency, Language Proficiency, and Reading Proficiency. Although the Department has published no lists of competencies specifically defined for each skill area, the goals of each proficiency test are summarized in Table 1.

Standards and Standard Setting

Passing standards for the tests were initially established by a committee which examined the data from the Proficiency and Review tests administered to grade 12 students in 1960. The committee, made up of Denver teachers and administrators, set a passing score of 28 correct items out of a total of 50 (56%), for each test. Over the next several years, the passing score was gradually raised to the level of 32 correct items out of 50 (64%). The passing scores remain at this level today.

Target Groups and Testing Schedule

The first testing in the Proficiency and Review program is done at grade 9 level. Tests are administered twice each year (December and April) to all students, beginning in grade 9. The 1975 State bill also requires testing to begin in grade 9 and to take place twice each year; Denver's reasons for its testing schedule were: (1) to begin testing early enough to overcome student test anxiety; (2) to allow time for remediation; (3) to offer enough test-taking opportunities to those students who fail any of the tests.

TABLE 1

Goals and Subskills Defined for Each of Four Competency Areas in the Denver Proficiency and Review Program

Numerical Proficiency

GOAL: Measure ability in the four fundamental arithmetical operations as applied to whole numbers, fractions, decimals, and denominate numbers, and involving:

(a) conversion from one fraction to another, decimal numerals, and percents
(b) expression of large numbers and monetary amounts in numerals
(c) computation of percentages
(d) determination of relative sizes of numbers in lists of fractions and decimal numerals

Spelling Proficiency

GOAL: Measure ability to recognize the correct spelling of words against the New Iowa Spelling Scale and commonly used spelling textbooks.

Language Proficiency

GOAL: Measure ability to recognize correctly written English, including grammar, punctuation and capitalization.

Reading Proficiency

GOAL: Measure reading comprehension ability as reflected in recognizing details in a reading passage and in making simple inferences. Measure knowledge of word meaning (vocabulary).

Test Instruments

In 1959, the Department of Curriculum Services, in cooperation with the California Test Bureau, developed Denver's proficiency tests in mathematics, reading, spelling, and writing. Three forms were developed for each skill area; the process of development and verification for these forms was not documented. CTB revised the tests in 1968 and the tests have not been changed since then.

Each of the four tests consists of 50 items. In mathematics, these test items are equally split among addition, subtraction, meanings, multiplication, and division; all are multiple-choice items and have five alternatives. In spelling, the 50 items are also multiple-choice with instructions to the student to choose the misspelled word. Four words are provided, with the fifth choice being "none," i.e., no words are spelled incorrectly. In language, the test is a proofreading task; each line of two selections totalling 50 lines constitutes one item. Finally, the reading proficiency test has two sections: reading comprehension and vocabulary, with 24 and 26 multiple-choice items, respectively.

Test Administration

The proficiency tests are administered twice a year (December and April) by teachers in the Denver school system. Initial testing of students at the grade 9 level involves all four competency areas; students are retested only in the competency test area(s) in which they fail to pass.

A different form of the test is used each time it is administered. The Department has a computerized data bank that holds each student's testing history, and teachers receive from the Department preprinted, individualized answer sheets for their students. Currently there is some feeling in the Department that four, rather than three, forms should be employed so that a student who fails a given test does not take the same test until after two years have elapsed. Even with the use of three test forms, the Department acknowledges the difficulty of ensuring test security.

Scoring and Analysis

Prior to 1972, the California Test Bureau scored all tests under contract to the Denver school system. In 1972, the Department began scoring the tests using its own computer hardware. The report for each student tells the number correct on each test and whether that score is a pass or fail.

Reporting/Dissemination

The Department sends reports of each student's scores on all tests to the student's teachers and parents. Reports to the teacher are sent after each test administration; those to the parents are printed on report cards and sent four times a year. The students themselves receive skill analysis reports stating the areas in which they need additional study. The reports are the bases for the development of remediation programs.

Use and Implication of Test Results

Consequences to students. Students who fail to pass all four proficiency tests will not be graduated from high school. Such students may, however, receive a certificate of attendance for completion of other requirements. Students who have received this certificate may return at any time to the Department of Development and Evaluation and take the competency tests which were failed. On passing the tests, the students then receive diplomas, providing all other graduation requirements have been met.

Consequences to programs. The State's Senate Bill 180, passed in 1975, requires remediation for the students who fail the competency tests, and the Denver school system complies with that requirement. However, the Department of Development points out that the curricula objectives in areas covered by the proficiency tests do not seem to have changed much as a result of the testing program. The program has been in place for 18 years and the pass/fail statistics remain relatively constant; only 1-3% of the senior class is denied diplomas each year due to not passing all four sections of the Proficiency and Review tests, according to one source.

Consequently, the Department believes, teachers tend to take the low student failure rate as an indicator that the curriculum objectives are being taught and learned. There has, however, been a great deal of change in curriculum materials and techniques, particularly in reading instruction.

Provisions for Special Populations

Test forms are available in Braille; there are, however, no specific provisions in the program for testing special populations. The minority community in Denver has, over the years, expressed some concern over competency testing but Denver's school teachers, according to the Supervisor of the program, believe that students should be able to function in an English-speaking society. Therefore, no tests have been translated into other languages. The minority community continues to demand, however, that additional resources be made available so that minority students can learn to function in the English language.

Program Evaluation

With the exception of the 1968 impact study described earlier, there has been no formal attempt to evaluate the Denver competency testing program.

Program Resources and Costs

General program staffing. The Supervisor of the Department of Development and Evaluation and the Supervisor of Testing are the only full-time staff members assigned to Denver's Proficiency and Review program. Department personnel, together with school system teachers, principals, and instructional consultants, constitute the support for the program.

Approximate costs and funding sources. No cost estimates were available. Funds for the program come from the annual budget of the Denver public schools.

Future Directions

Denver public schools are now developing grade 3 and grade 6 minimum competency tests. Although little information is currently available, a group of teachers, principals, and curriculum and testing specialists are working on competency test specifications and the details associated with testing at the proposed grade levels. The Denver school system is attempting to develop its own tests instead of employing outside consultants or test development companies.

References

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CONNECTICUT

In 1978, the Educational Evaluation and Remedial Assistance (EERA) Law was enacted, mandating that each local district in Connecticut develop a plan for educational testing and remedial assistance. The purpose of the program is to occasion instructional improvement and remediation at the local level. Beginning with the 1979-80 school year, local districts are required to annually test at least the students in grades 3, 5, and 7--or any three nonconsecutive grades between 1 and 8--in reading, basic writing skills in language arts, and mathematics. The Department of Education, in the same year, is to implement a statewide proficiency testing of ninth-grade students in reading, language arts, and mathematics. Local school districts take all responsibility for local testing; the Department is developing the statewide proficiency test and expects to enlist the help of local school personnel in administering it.

All students in the designated grades are tested with the exception of all special education and some bilingual students. Test results are not required by law to affect decisions on student promotion or graduation; rather, local districts must use results of both the local and State testing programs for instructional improvement and the provision of remedial assistance.

Legislative and Policy History

Policy history. Around 1976, interest in the minimum competency testing movement was expressed by Connecticut State administrators. The Commissioner of Education appointed a committee on minimum competency testing and charged them with studying (1) whether passing a proficiency examination should be required for graduation and (2) what types of skills should be tested on such an examination. The committee consisted of school principals, superintendents, and other educators from around the State and was directed to report to the State Board of Education.

The recommendations that the committee made to the State Board of Education were brought out at legislative hearings, since, during this period, the legislature was also considering a series of proposed bills on proficiency testing. In 1976, the State legislature considered and rejected two bills concerning high school graduation requirements:

(1) HB5836, which would have allowed exemptions from the requirement that all students attend school until the age of 16, and would have permitted high school graduates and nongraduates to obtain a State certificate of achievement upon passing a state-administered proficiency examination; and (2) HB5837, which also called for a state-administered proficiency examination but would have allowed students who passed the examination to graduate with an equivalent diploma prior to the end of their senior year. A third bill, HB5839, finally did pass but was never implemented because funds for implementation were never appropriated. This bill would have required students to take a proficiency examination before graduating from high school, with certification of passing being recorded on students' diplomas.

In 1978, the law that brought into being Connecticut's present proficiency testing program was enacted. This law, the Educational Evaluation and Remedial Assistance (EERA) Law (Section 10-14, M-R of the Connecticut General Statutes), mandates that each local or regional board of education in Connecticut develop a plan for educational testing and remedial assistance. The act specifies that each local school district must annually test at least the students in grades 3, 5, and 7--or three nonconsecutive grades between 1 and 8--in reading, basic writing skills in the language arts, and mathematics. The act further specifies that students enrolled in the ninth grade (either in a public school or an endowed or incorporated academy) must take a statewide proficiency examination in the same content areas. The local school districts must use the results of both the local and State testing programs for (1) instructional improvement and (2) the provision of remedial assistance. According to the Department of Education, it was the opinion of both the State Board's advisory committee and the legislature that proficiency testing not be tied to graduation or the receipt of a high school diploma.

Phase of implementation. The EERA Law specifies both procedures and schedules which local school districts must follow in implementing a plan of educational testing and remedial assistance. By September 1, 1979 each school district must submit to the State Board of Education for approval a plan which specifies how a testing program is to be implemented and how such a program will improve the instructional process. Beginning with the 1979-1980 school year, districts will begin their local testing programs and the State will begin implementation of the statewide proficiency exam. By September 1, 1980, and biennially thereafter, each school district will submit to the Department of Education a report describing the results of the testing program.

Goals and Purposes

General goals. The EERA Law specifies two indicators which school districts must use to measure the success of their testing programs: those of (1) instructional improvement and (2) student progress as a result of testing and remedial assistance. The broad goals of the EERA Law, therefore, are that the local and State testing programs will result in both instructional improvement and individual student remediation.

Specific purposes. Regarding specific purposes of the EERA Law, the testing program was not intended to be tied to promotion, graduation, or early exit from high school. Rather, curriculum modification and screening are the predominant purposes. According to State regulations which have been developed in connection with the EERA Law, both the local and State tests are to serve as a first diagnostic screening, but local districts are not to use the tests as the sole basis for determining those students in need of remedial assistance. Before assigning a student to remediation, further information is necessary, such as teacher judgment, parental opinion, or additional testing results.

Program evaluation is also one of the purposes of the EERA Law. The local districts are responsible for reviewing their instructional programs as part of their report to the State, and the State is responsible for reviewing the biennial reports from each local school district as well as conducting, on a regularly scheduled basis, field assessments of local district testing programs.

If the Department of Education judged that there were deficiencies in a local instructional program, the school would be asked to correct these deficiencies. If a local district were found to be in violation of the law, the Department has the authority to compel compliance. A Department of Education representative stated that the EERA Law is not intended to establish the principle of teacher accountability; the law simply does not address this point.

While the distribution of funds is not a stated objective of the act, the formula that the law sets out for remedial education appropriations will utilize the ninth grade test results and factors related to local testing programs for the allocation of extra remedial funds and will favor those districts with the highest number of students performing "significantly below grade level or a comparable level of expected performance."

Competencies

In establishing the EERA Law, Connecticut chose to emphasize basic skills in its proficiency testing. Local districts are required to set up a testing program to examine "basic reading, basic writing in the language arts, and mathematics skills." The State proficiency examination for ninth-graders will also test these three content areas. According to a Department of Education representative, it was considered that life skills are more diverse and more difficult to test than basic skills. It was decided to test the material covered in the schools. There was also some concern over possible litigation if the skills tested were not taught in the curriculum. In addition, it was believed that the accomplishment of basic skills is closely connected to the accomplishment of life skills.

While the law specified the three areas of basic skills to be tested, it did not define them. Advisory Committees, consisting of school administrators and college instructors, were appointed by the State Board of Education to identify competencies in the three fields to be tested on the State proficiency test. Five committees were established: three in the content fields (reading, language arts, and mathematics), one in psychometrics, and one in test bias. In order to validate the competencies selected and to allow people a chance to suggest other competencies not selected by the committees, a survey was sent to 5,000 Connecticut educators, students, school board members, legislators, and parents. A series of six public meetings were also held throughout the State to encourage discussions about the competencies on which all Connecticut ninth-graders will eventually be tested. The competency lists were then revised on the basis of survey results and the public meetings.

There has been no attempt to set statewide competencies for the local testing programs. The selection of skills to be assessed and the selection or development of tests are left to local discretion. The State, however, has the power to require a local school district to change its tests if the Department of Education considers them to be unsatisfactory.

Standards and Standard Setting

The Department of Education has not yet determined an expected level of achievement for the ninth-grade test. A psychometrics committee has been set up to review methods for setting such a standard. This committee will work with the Department to set the score following the field-testing of the ninth-grade examination in the fall of 1979.

Setting standards for the locally administered tests is a matter of local discretion. According to a Department of Education spokesman, it is hoped that each local school district will design a testing program to diagnose its own deficiencies. Whatever standards are set locally, scores on the local tests as well as on the State examination may be used only as the first step in identifying students who are candidates for remediation; further information is required before a final determination is made.

The EERA Law specifies that local districts which apply for remedial assistance are to receive appropriations according to the number of students in the school district scoring "significantly below grade level or a comparable level of expected performance." Although the Department of Education has not yet set a formula for the allocation of remedial funds, it is likely that both statewide and local test scores will be factors. Results from the State tests are expected to play a larger role in these calculations, however, because of the consistency of the State test instruments and administration.

Target Groups and Testing Schedule

The EERA Law specifies that the State proficiency test is to be administered to ninth-graders both in public and incorporated and endowed academies. The first administration of the test will be in March 1980.

The local district tests are required by the EERA Law to be administered to at least those students in grades 3, 5, and 7, unless an alternate testing plan is suggested by the district and approved by the State Department of Education. According to the Department, any reasonable plan that called for testing any three nonconsecutive grades would probably be approved.

The original rationale for testing alternate grades was that such a schedule would allow some time after assessment for students to be remediated. While the grades selected for testing need not affect the grades in which remediation will be carried out, the Department expects that grades for testing and remediation will be linked in most cases. The intent in choosing the earlier grades for testing was to permit the correction of educational deficiencies and problems at an early stage, and to allow time for appropriate remediation.

The local district tests can be given at any time during the year, or at more than one time, in order to allow as much flexibility as possible to meet local needs.

Test Instruments

Statewide proficiency examination. The Connecticut ninth-grade proficiency examination is currently being developed by National Evaluation Systems (NES) and the College Board, under contract with the Connecticut Department of Education. Test items will be developed to assess the competencies determined by the Advisory Committees and by the views of the public which were collected through the survey and the series of public meetings held throughout the State. The test items will be reviewed by the three content committees and by the test bias and psychometric committees.

The proficiency examination will be designed to assess a student's knowledge in the areas of reading, mathematics, and basic writing skills in language arts. Although the language arts include listening and speaking, the test will concentrate on written expression, focusing specifically on two basic aspects: (1) the writing experience itself; and (2) related language experience skills, including mechanics of written expression, composing and organizing skills, and library skills for writing tasks.

Local school personnel will not see the test before its administration. It has not been decided yet whether the examination will be made available to the public after administration. Alternate forms of the State examination will also be developed for subsequent administrations.

Local tests. The EERA Law mandates local testing and gives a rationale for such testing, but does not specify what features would make a test acceptable or unacceptable. Each school district must include in its plan submitted to the Department of Education information regarding how the test was chosen; the local plan must also address issues of test reliability, validity, and practicability.

The position of the Department of Education is that most commercial standardized tests are reliable and, in general, acceptable. A locally developed test would be considered acceptable if, in its plan, the school district specified how the test was developed, and how reliability, validity, and practicability would be ensured.

Test Administration

Statewide proficiency examination. Local school personnel will be asked to cooperate in the distribution and in-school administration of the ninth-grade proficiency test; classroom teachers will be asked to administer the tests. All ninth-grade students in Connecticut will be tested during the same time span, except for absentees who will take the scheduled makeup examination. The Department of Education has not yet developed plans for maintaining the security of the test.

Local tests. Test administration procedures for the local tests are left to the local school districts. However, these procedures must be included as part of the plan that each local district is to submit to the Department of Education, which has final approval authority.

Scoring and Analysis

The scoring and data analysis for the Connecticut proficiency examination will be performed by NES, the contractor, which is also responsible for assisting the Department in the administration of the ninth-grade test. Scores for each student will be reported by total test and by competencies or constructs (i.e., clusters of objectives).

In the reports that NES and the College Board will prepare for the Department of Education, scores will be reported by student, by school, and by district. Each district will receive copies of all three reports. While the Department of Education will probably keep records of the scores by each district, there are no plans to keep records classified by school or by student. There are also no requirements for local districts to report scores of their own tests to the State.

Reporting/Dissemination

The score reports generated by student, by school, and by local district will be distributed to each of these populations. Reports will be produced for the public, the legislature, and the State Board of Education. The State Board of Education will receive aggregate reports by local school district only. Test results must be reported to parents, but there are no regulations as to whether or not test results will become part of a student's permanent file.

Use and Implications of Test Results

Consequences to students. Since the Connecticut statewide testing program is designed to correct education deficiencies of both students and instructional programs, there are more consequences to students who fail than to students who pass the tests. Passing the local or State test entails no consequences with regard to graduation, promotion, or grading (although local districts are not prohibited from using test results as information bearing on grading policies). Failing either the State or local tests may result in remediation for the individual.

Consequences to programs. One of the purposes of the testing program is to provide information to school systems upon which program improvements may be based. Local school districts are encouraged to diagnose their own deficiencies and to make improvements where necessary.

Appropriations for remediation are calculated on the basis of test results; testing, therefore, has a direct effect on the amount of funds which a district is to receive for remediating students. The test results may also focus attention on a local district and increase its accountability for the performance of its students. While local school districts are allowed a great deal of discretion in designing and implementing their testing programs, the Department of Education may step in to recommend or require changes if it appears that a local district's instructional programs are inadequate.

Provisions for Special Populations

The EERA Law specifies that its provisions do not apply to all special education and to some bilingual students. According to the Department, these populations were not included in the provisions because funded programs and requirements for testing these special populations already exist. Under certain circumstances, however, such students may take the proficiency tests; this may occur, for example, when a district has too few bilingual students to qualify for state-funded programs. Proposals have been submitted to the legislature for the current year to amend the EERA Law and require that special populations be included in the EERA testing. Test results for these groups would not enter into grant determination. If this proposal passes, the special populations will take the same test as other students.

Program Resources and Costs

General program staffing. The Connecticut proficiency testing program is run by personnel in the Department of Education's Bureau of Research, Planning and Evaluation, under authority delegated by the State Board of Education. A project director and manager are primarily responsible for the conduct of the program, and they receive assistance from three department consultants, one from each subject area.

Three subcommittees of 12-15 members each, again one for each subject area, are charged with identifying the competency objectives to be assessed in the ninth-grade proficiency test. The committee members represent a wide regional distribution and include local district content specialists, classroom teachers, and administrators, and college instructors.

All staffing for the local district testing is the responsibility of individual local districts.

Approximate costs and funding sources. Originally $90,000 was legislated for implementing the EERA law, a sum which included costs of staff assistance, test development, and the development of testing procedures. The cost will be more than that, however. The contract for test development was set at $155,000, and the State Department of Education has estimated auxiliary expenses at $40,000-$50,000. This money will come from the legislature as part of the State Board of Education budget. The continuing cost per year of the EERA program is estimated at approximately $100,000 for staffing, monitoring, and other costs.

A hidden cost of the EERA program may be the remediation to be carried out at the local district level. While the EERA Law sets up a system whereby remedial assistance grants may be given to school systems, remediation may nevertheless turn out to be very costly for the local districts. At this point no money has been legislated for remedial grants, although the implication of the EERA Law is that money will be available. Title I funds are already available for remediation, but these monies can be used only for the educationally deprived in target schools.

At present the two sources of funding for the EERA Law are State and local budgets.

Program Evaluation and Future Directions

Because the EERA Law is still in the earliest stages of implementation, there are few plans at this time for program evaluation and modification at the State level. Each local school district is required by the EERA Law to submit to the State biennial evaluations of its testing program, including indicators of the program's effects on instructional improvement and of student progress resulting from remediation. A Department of Education spokesman stated that while the Department had no plans for program evaluation, if a decision is made in the future to evaluate the program, the State evaluations will probably be based primarily on these local biennial evaluations and field assessments. These State evaluations may then form the basis for legislative change.

References

Connecticut State Legislature. Sections 10-14 m-r of the Connecticut General Statutes.

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DELAWARE

Delaware has been developing and implementing a system of goal-directed and performance-based instruction since 1972. Delaware does not have a legislated minimum competency testing program but rather, has a voluntary promotion policy set by the State Board of Education that specifies minimum performance standards. Local school districts are allowed autonomy in determining the best way for implementing the promotion policy in their systems and for evaluating minimum performance requirements. The State Board of Education has approved policies and minimum performance standards based upon joint recommendations by representatives of local school districts, higher education, and the Department of Public Instruction. The Department monitors the implementation of the promotion policies by means of on-site visits and census testing in grades 1-8 and 11 with the California Achievement Test (CAT). Local school districts are responsible for sequencing objectives, developing curricula, preparing instructional formats, and developing remediation plans. Delaware's system of goal-directed and performance-based instruction will be fully implemented by 1981.

Legislative and Policy History

Policy history. The assessment of student achievement of minimum performance requirements in Delaware reflects both an ongoing concern for the equality of education in the State, and the Department of Public Instruction's belief in local district autonomy. No legislation mandates statewide minimum competency testing; rather, the Department's policy requires local districts to assume much of the responsibility for developing and implementing a performance-based system and for assessing student mastery of the minimum requirements. The Department purposely avoids calling its program one of "minimum competency testing" because of the broad use of "competency" in the field; for the Department program, the term "minimum performance requirements" is a more accurate description.

In 1972, the Department first developed the Delaware Educational Accountability System in order to monitor and assist local school districts in attaining quality educational programs. The system was designed to answer four basic questions:

(1) What do we want Delaware schools to accomplish?

(2) What have we attained?

(3) What are the strengths and weaknesses?

(4) What can be done to improve?

The Department then translated these four questions into a ten-step process to encompass two major phases of accountability in education: a needs assessment phase, and a program improvement phase. The steps of each phase are listed in Figure 1.

FIGURE 1

Delaware Educational Accountability System

Needs Assessment Phase

1.0 Determine Learner Goals
2.0 Determine Learner Objectives
3.0 Assess Learner and School Status
4.0 Determine Educational Needs

Program Improvement Phase

5.0 Establish Educational Priorities
6.0 Examine Program Alternatives
7.0 Select Most Feasible Program Alternatives
8.0 Design Corrective Action Plans
9.0 Implement Corrective Action Plans
10.0 Assess Impact of Corrective Action Plans

From 1972 through 1977, the Department stressed the needs assessment phase of the system.

Then in 1977, the Department, in conjunction with an 18-member committee comprising Delaware educators from local school districts and universities, developed recommendations for a promotion policy which is to be part of the goal-directed and performance-based instructional system. The State Board of Education approved these recommendations on September 15, 1977, which required that:

(1) Each school district develop a promotion policy based on student achievement to assure the attainment of competency in the basic skills from grades K-8. The effective date of implementation of the promotion policy is September 1978.

(2) The local school districts extend their promotion policies based on student achievement to include grades 9-12. The effective date of the promotion policy is September 1979.

(3) The State Board of Education and local school districts emphasize the need for instruction in reading at all grade levels as part of basic skills development.

(4) In the instances where students are receiving special education, the local school districts consider the following options as part of a promotion policy:

  a) that students unable to perform satisfactorily the basic skills at either the elementary or high school level be granted a Certificate of Attendance and/or a Certificate of Performance in recognition of the level of basic skills performed;

  b) that students satisfactorily performing the basic skills be granted a Certificate of Performance;

  c) that students satisfactorily performing the basic skills and the required courses necessary for graduation be granted both a Certificate of Performance and a High School Diploma.

(5) The vocational technical schools establish the basic competencies to be performed by students in order to complete their designated courses or programs. These competencies are to be submitted to the State Superintendent on or before June 1, 1978;

(6) The survey test for eleventh-grade students be developed and piloted before June 1, 1978;

(7) The pilot board undertake a review of certification requirements relative to needs of teachers to provide instruction in basic skills and to assure promotion based on achievement (DPI, 1977c, pp. 3-4).

In addition, a policy was approved which suggested that local districts use the recommendations of committees dealing with the issue of handicapped students. This policy appears in a later section of this report.

A policy for the establishment of statewide minimum performance standards for graduation was also adopted by the Board as follows:

> That the appropriate level of performance in Reading, Writing, and Arithmetic necessary for high school graduation be established by the State Board of Education to become effective with the graduation class of 1981. The appropriate level of performance is to be determined by July, 1979 (DPI, 1978, p. 1).

The Board's 1977 resolution charged local school districts to develop their individual promotion policies based upon these guidelines and statewide educational objectives. The objectives, described later in this report, were pilot-tested in the schools to determine (1) the extent to which the objectives were already included in the curriculum, and (2) how well the students needed reinforcement instruction.

While the local districts must develop and implement their own plans for assessing student mastery of the minimum requirements, the Department reviews the plans, conducts follow-up site visits to make sure implementation takes place as planned, and determines whether additional support or information is necessary. Each district should submit to the State Superintendent a promotion policy that contains most of the following seven components:

1 - District educational goals
2 - Objectives for basic skills
3 - Performance expectations or levels
4 - Student placement or promotion
5 - Alternative programs of learning

6 - Maximum or minimum time to perform expectations or to achieve competencies
7 - Evaluation techniques for determining and verifying student performance and progress in the basic skill areas of reading, writing, and arithmetic (DPI, 1978, p. 2)

Phase of implementation. By September 1978 local school districts are to develop and implement promotion plans for grades K-8 based on student achievement of basic skills. They are to extend these plans to include grades 9-12 by September 1979. The Board of Education is to establish statewide minimum performance standards in reading, writing, and arithmetic required for high school graduation by 1979, to become effective for the class of 1981. Assessment of student attainment of statewide minimum performance requirements is to occur in grades 1-8 and 11.

Associated litigation. Delaware's program has given rise to only one case of litigation. A suit was brought against the Board by a Wilmington newspaper seeking the release of student test results. The suit was settled out of court with statewide results released to the newspapers; one suit had no relevancy to the performance or competency requirements.

Goals and Purposes

General goals. The Department of Public Instruction states its basic goals for goal-directed and performance-based instruction in Delaware schools in its program implementation plan as follows:

> The basic goals of public education have been established to provide every student with the opportunity to (1) acquire basic educational skills, understandings, and knowledge; (2) develop appropriate social skills and understandings; (3) acquire information about historical and cultural developments; and (4) develop competencies which enable them to become contributing and productive citizens (DPI, 1977d, p. 2).

According to the Department, basing the teaching/learning process on prescribed standards or expectations enables students to perform basic tasks before pursuing more difficult or advanced subject matter.

More specifically, the Delaware system of goal-directed and performance-based instruction:

(1) provides a checkpoint for student progress in the acquisition and application of basic skills, information, and knowledge;

(2) provides a system for instruction for implementing goal setting, individual student responsibility, and corrective action for improvement;

(3) provides a means to minimize or eliminate meaningless and irrelevant instruction, while developing standards for quality instruction;

(4) establishes standards or expectancies toward fulfilling the requirements for receiving a high school diploma (DPI, 1977d, p. 3).

Specific purposes. The following noninclusive basic purposes were set forth by the Department in 1977:

(1) To provide meaningful and relevant instruction through setting standards for achievement.

(2) To improve continuously the educational system using data that are gathered regarding student attainment of goals.

(3) To inform students as to what is expected of them in the learning situations so they can assume more responsibility for their own learning.

(4) To increase the percentage of students achieving the performance standards.

(5) To inform parents of the status and progress of their children.

(6) To improve teacher techniques and competence by providing feedback as to students' progress (DPI, 1977c, p. 2).

Competencies

The Department of Public Instruction, in conjunction with the 18-member committee mentioned earlier, developed the performance requirements for graduation and the components of the promotion policy in the academic areas of reading, writing, and mathematics.

In developmental phases, the competencies received considerable examination by relevant educational constituencies. The competencies were reviewed by members of local school districts, curriculum councils, PTA leaders, student government leaders, and by members of the business community. In particular, the recommended competencies were field-tested in two Delaware high schools in 1978. The purpose of this field test was to determine:

(1) the validity of the requirements;
(2) the extent to which basic skill performance can be determined and unified in the classroom;
(3) the feasibility of assessment procedures;
(4) potential outcomes from the assessment on students/faculty/administrators;
(5) potential improvements to basic skill performances, courses and instructional processes.

Following review, the policies were approved by the State Board of Education. Table 1 lists the state-developed graduation performance requirements for reading, writing, and mathematics.

Local districts were given the responsibility for developing individual promotion policies within the guidelines of the previously developed state program. In addition to developing these programs, local districts are also responsible for evaluating student mastery of the performance requirements. The promotion programs are monitored by site visits conducted by Department of Education personnel, and achievement of the performance requirements is ascertained through State-conducted census testing using the California Achievement Test.

TABLE 1

Student Performance Requirements for Graduation

Reading: The student will

1. Demonstrate knowledge of a basic reading vocabulary.
2. Identify words in context.
3. Determine word meaning from the way words are used in a passage.
4. Comprehend the literal meaning of a passage.
5. Understand relationships, draw conclusions, and make inferences.
6. Identify information required to complete forms.
7. Use appropriate reference skills.

Writing: The student will

1. Compose grammatical sentences using correct capitalization, spelling, and punctuation.
2. Compose a paragraph that includes a topic sentence, supporting sentences, a concluding sentence, and transition.
3. Compose a message, an announcement, and a memorandum.
4. Compose business and social letters using accepted formats.
5. Complete certain forms.
6. Use appropriate levels of language.
7. Spell correctly the words on a specified list.
8. Write legibly in manuscript or cursive form.

Mathematics: The student will

1. Read and write numerals.
2. Arrange numbers including whole numbers, fractions, and decimals in order.
3. Determine equivalent forms of fraction, decimals, and percents.
4. Use estimation in mathematical computations.

TABLE 1 (continued)

5. Add and subtract whole numbers, fractions, decimals, and check computations.
6. Demonstrate mastery of the basic facts of multiplication and will multiply whole numbers, fractions, and decimals.
7. Divide whole numbers and decimals.
8. Perform operations with percents and solve applications with percent by estimation and then determine a solution.
9. Identify common geometric figures and find the perimeter, area, and volume of common geometric figures.
10. Estimate and measure time, temperature, distance, capacity, and weight using metric and customary units of measurement.
11. Solve measurement problems.
12. Estimate and then determine a solution to practical problems involving whole numbers, fractions, and decimals.
13. Solve money problems.
14. Read and interpret graphs, tables, and maps.
15. Compute and interpret an average (mean) and median of a set of data.

Standards and Standard Setting

Performance standards for the local promotion programs are set by local personnel and supervised by the State. Mastery is verified by the classroom teacher by means of checklists. Student graduation is determined by teachers and principals and is based on many measures of the student's competence. These measures may include teacher-made tests, homework, and classroom performance. In order to graduate, a student must complete all of the minimum performance requirements as well as 18 instructional units.

Minimum performance standards vary both within and across the content areas. Many basic skill performances include a required level or standard within the text of the statement. This standard may be expressed as a percent or an error rate. In cases where the standard is not specified, the required level is 70%. In the area of mathematics, the student is required to perform all skills at an accuracy level of 70%. In the area of reading, one requirement is for the student to identify words in context. In order to meet this requirement, the student must perform at an accuracy level of 95%. In writing, a student must compose a message, an announcement, and a memorandum. The performance standard specifies that the content must be complete, concise and correct, with not more than a total of six errors in the five areas of sentence structure, beginning capitalization, spelling, end punctuation, and usage.

As mentioned earlier, the State Board of Education approved in September 1977 a recommendation that it specify a level of performance in reading, writing, and arithmetic, deemed appropriate for high school graduation. This requirement is to be established by July 1979, to become effective with the 1981 graduating class.

The judgments on student performance will focus on the application of basic skills to exercises commonly encountered by an eighth-grader. The student is to be rated at the conclusion of the eighth grade or at a point considered appropriate by the teacher and/or student.

The State expects to use the California Achievement Test to monitor differences across districts in assigning mastery. There is no minimum performance level on the CAT; and consequently, no relationship between performance on the CAT and graduation or promotion.

Test Instruments

Currently, student achievement in basic skills is monitored by annual census testing in grades 1-8 and 11. The California Achievement Test was chosen for this assessment because it most closely matched the Delaware minimum performance requirements. As a norm-referenced test, it allows intrastate and interstate comparisons to be made.

Only basic skills of reading, writing, and mathematics are included for assessment in this program. Due to negative reaction by the local districts, instruction and corresponding measurement of life skills was not developed. This negative reaction was due to the fact that major curriculum revision would be required by the inclusion of the life skills.

The CAT is the only test used statewide now; the local districts use a number of other tests. There is no statewide test of the competencies. At present, there is no eleventh-grade survey test and contrary to an earlier recommendation, the fourth- and eighth-grade tests have not been changed to objective-referenced tests.

The local districts use the CAT and other tests they administer as instructional tools and for individual and group diagnosis of strengths and weaknesses.

Test Administration

Once each year, during the fall or the spring, the State Department of Education conducts census testing in grades 1-8 and 11. The test instrument used is the norm-referenced California Achievement Test which closely matches the specifications of the minimum performance requirements.

The staff of the Department of Public Instruction conducts a training program for Delaware district testing coordinators. The procedures for administering the tests, and for reading and interpreting the data, are explained. Local personnel administer the CAT during a prescribed five-day period and return all test materials to the Department for scoring and analysis.

The raw data from the CAT is returned to the testing company for reduction scoring and analysis. The Department is provided with results by performance area on statewide, district, and individual examinee bases. The Department publishes statewide and district norms and is able to make district, state, regional, and national comparisons.

Reporting/Dissemination

Reports of a non-technical nature are sent to parents, teachers, and chools. Individual scores are sent directly to the district. Data are lso included in the students' permanent record with the performance equirements checklist. Technical reports are available upon request.

Use and Implications of Test Results

Parents, schools, and teachers all receive test reports. Data regarding CAT becomes part of students' permanent record for grades 1-12. Teachers at the local level prepare a checklist of minimum performance requirements that is a part of a student's permanent record for grades K-12. Parents receive a letter from the school that indicates when their child is not passing requirements.

Consequences to students. There is no State mandate for passing a competency test for graduation. All students must pass the performance requirements plus 18 units of instruction. Promotion from grade-to-grade is based on teacher/principal judgment. Parents receive notification from the school when a child is not passing requirements.

Consequences to programs. Statewide advisory committees in reading, writing, and mathematics analyze the items and the test results, and make recommendations for remediation and program improvement. These recommendations are submitted to the State Board of Education and then disseminated to the school districts. The Department staff will then provide assistance to the local districts for instructional development. Any changes in instructional methods take place at the local level, but are monitored by the State.

Provisions for Special Populations

Special education is a recognized component of goal-directed and performance-based instruction. In Delaware, Individual Education Programs (IEP) are designed and suited to the special individual needs of the handicapped child. Annual reviews determine promotion or placement decisions for special populations (see Proposed Minimum Performance Standards, 1978, p. 1). Graduation requirements for handicapped students are the same as for all students. For those students unable to meet minimum diploma standards, a certificate of performance, specifying which basic skills were performed, will be given.

In their assessment of handicapped students, the State suggests that local school districts take into account the following recommendations of the IPRD (Identification, Placement, Review, and Dismissal) Committees:

(1) students who may not be able to meet the minimum performance standards in the basic skills should be identified at placement;

(2) mainstreamed students should be considered capable of meeting the minimum performance standards in the basic skills;

(3) the minimum performance requirements should be adapted as appropriate for students who are physically or otherwise handicapped;

(4) special education students who are considered capable of doing so, should have the opportunity for continued instruction in the basic skills.

Program Resources and Costs

General program staffing. The Department of Public Instruction is divided into two specific departments: a Department of Instruction and a Department of Learning, Research and Evaluation. There is no specific State mandate for performance requirements; the Department of Public Instruction, therefore, only monitors the activities of the local districts and provides technical support. To assist in their remediation programs, the local districts will receive one additional teacher or the equivalent in services and supplies for every 600 students.

The staff of the Department has not increased as a result of the minimum competency program. Rather, the goals and responsibilities of members of the Department have been restructured to accommodate increased activities.

Approximate costs and funding sources. No additional funds were allocated for the program aside from the standard federal Title I monies. The local districts can get funding for remediation programs. A request for $2,500,000 for implementing the instructional program has been made.

Program Evaluation

The second phase of the Delaware program will be implemented by the local districts after Department on-site visitations and CAT analysis to determine changes in student performance, revisions in the curriculum, and other impact on the schools.

Because of the magnitude of the goal-directed and performance-based instruction plan, the State Board of Education requires the Department of Public Instruction to provide evidence of its effectiveness in addition to evaluation conducted at the local level. In compliance with this requirement, the Department of Public Instruction will be completing two types of assessment. The first is program status assessment. By visiting individual schools, the Instruction Division will determine the completeness of the components considered essential for the goal-directed and performance-based instruction program. The second type of assessment is a measurement of student status. This is the responsibility of the Planning, Research and Evaluation Division. Student status assessment includes both statewide testing in major curriculum areas and student performance on the minimum basic skills.

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FLORIDA

Legislative and Policy History

Policy history. In 1976 the Florida legislature enacted the Educational Accountability Act (EAA). According to the Department of Education, the 1976 act was an attempt to systematize legislation pertaining to accountability in education by amending existing statutes contained in the 1971 and 1974 versions of the act and by creating new statutes as well. A brief review of the provisions of the 1971 and 1974 legislation, as well as legislation passed subsequent to the 1976 act will clarify the current statewide assessment program and the state-imposed graduation requirements which were mandated in 1976.

In 1971, the Florida legislature enacted an Educational Accountability Act, which mandated the establishment of educational objectives "for each grade level, and subject area, including, but not limited to, reading, writing, and mathematics (SDE, 1976, p. 7) and the creation of a statewide assessment "to determine periodically pupil status, pupil progress, and the degree of achievement of established educational objectives" (SDE, 1976, p. 1). The first three statewide assessments, conducted during the 1971-72, 1972-73, and 1973-74 school years, involved sample testing at various grade levels in reading, mathematics, writing, and science. The particular grades and areas assessed during these years are listed in Table 1.

In 1974, the legislature revised the 1971 act, stipulating that "all students in grades 3 and 6 be assessed in the subject areas of reading, writing, and mathematics in 1974-75 and all students in grades 3 through 6 be tested by 1976" (SDE, 1976, p. 7). During the 1974-75 school year, all students in grades 3, 6, and 9 were assessed in reading, writing, and mathematics. During the 1975-76 school year, all public school students in grades 3 and 6 were tested in reading, mathematics, and writing.

Also during the 1975-76 school year a subcommittee in the Florida House of Representatives reviewed the steps taken by the Department of Education to implement the 1974 Educational Accountability Act. According to the Department, this review led to the passage of the 1976 act designed to consolidate legislation pertaining to accountability. Key components of this act included the establishment of "minimum performance standards" in reading, writing, and mathematics, the testing of all students in grades 3, 5, 8, and 11 on the new standards, and changes in graduation requirements. With respect to the latter, the legislature stipulated that

TABLE 1

Grades and Subjects Tested in the Florida Statewide Assessment Program

Year	Grades	Type of Testing	Subject
1971-72	2, 4	sample	reading
1972-73	3, 6, 9	sample	reading, mathematics, writing
1973-74	3, 6, 9	sample	reading, mathematics, writing, science
1974-75	3, 6, 9	census	reading, mathematics, writing
1975-76	3, 6	census	reading, mathematics, writing
1976-77	3,5	census	reading, mathematics, writing
1977-78	3, 5, 8, 11	census	reading, mathematics, writing (functional literacy in eleventh grade)
1978-79	3, 5, 8, 11	census	reading, mathematics, writing (functional literacy in eleventh grade)

local boards must establish standards for graduation to apply to the class of 1979 and future classes, and that these standards must include the following state requirements: ". . . mastery of the basic skills and satisfactory performance in functional literacy" (cited in SDE, 1977, p. 15); the State Board of Education was given responsibility for determining assessment procedures.

In 1978, the legislature enacted FS 232.246 which specified that, in addition to meeting local graduation requirements, students must master the eleventh-grade minimum performance standards in reading, writing, and mathematics and demonstrate "the ability to successfully apply basic skills to everyday life situations" (cited in SDE, 1977, p. 18) in order to receive a high school diploma; the legislation further specified that the latter requirement would be measured by a functional literacy test. Beginning with the class of 1979, only students who meet both the state and local requirements for graduation will receive a high school diploma. Those not meeting the state requirements will receive only a certificate of completion.

With respect to special populations, the legislature exempted certain populations from the state requirements (for a discussion of the populations exempted, see p. 116), and directed the State Board of Education to modify test procedures for handicapped students who are not exempted. Exempted students receive a special diploma if they meet all local requirements, but may request an opportunity to meet State standards. If they demonstrate mastery of basic skills and pass the Functional Literacy Test, they receive a regular diploma.

Phase of implementation. In accordance with the provisions of the 1976 act, the Department of Education prepared minimum standards for grades 3, 5, 8, and 11 in reading, writing, and mathematics. The State Board of Education adopted these standards in April 1976. The Department also in late 1976 began preparing the eleventh-grade Functional Literacy Test. In October 1977 all students in grades 3, 5, 8, and 11 were first tested on the newly adopted minimum performance standards. In addition, eleventh-graders took the Functional Literacy Test.

In August 1978 the State Board of Education renamed the eleventh-grade tests, calling the Basic Skills Test (of minimum performance standards) the State Student Assessment Test, Part I (SSAT-I), and the Functional Literacy Test the State Student Assessment Test, Phase II (SSAT-II). Both are administered as part of the statewide assessment in October of each school year. Students failing the SSAT-II may also take it the spring of their junior and senior years.

Under the provisions of the 1976 act, the class of 1979 is the first group subject to the state graduation requirements. As the result of a July 1979 ruling in a class action suit filed in Tampa, the State has been enjoined from requiring students to pass the SSAT-II (the Functional Literacy Test) as a prerequisite for a diploma for four years. Thus, the class of 1983 will be the first group of students required to pass this test as well as the SSAT-I in order to receive a diploma.

Associated litigation. There have been several legal challenges to the provisions of the 1976 Educational Accountability Act. The first, brought by the National Association for the Advancement of Colored People (NAACP), contested the right of the Department of Education to limit public access to the SSAT-II. The NAACP did not prosecute the case, and it has since been dropped.

In a second case, Brady v. Turlington, a Florida resident contended under the Administrative Procedures Act that the Commissioner lacked the authority to establish scoring criteria. The hearing officer ruled in favor of the plaintiff. In an appeal filed by the State, the District Court of Appeals subsequently upheld the authority of the Commissioner.

A third challenge, Brady and Blount v. Turlington, also involved the scoring criteria. In this case, the plaintiffs sought, under the Administrative Procedures Act, to have the scoring procedures used in the 1977-78 statewide assessment declared invalid. The hearing officer ruled in favor of the Department, and the District Court of Appeals subsequently upheld that decision, declaring that correct procedures had been followed.

In the most recent and extensive challenge to the provisions of the 1976 act, a class action suit was filed in the Tampa Division of the U.S. District Court in October 1978. Three classes of plaintiffs were recognized:

(1) all present and future twelfth-grade students in the Florida public schools who have failed and would continue to fail the SSAT-II;

(2) all present and future twelfth-grade black students in the same schools who had failed and would continue to fail the test; and

(3) all present and future twelfth-grade black students in public schools in Hillsborough County who had failed and would continue to fail the SSAT-II.

Defendants named in the suit included the Commissioner of Education, the Florida State Board of Education, the Governor, the Secretary of State, the Department of Education, the School Board of Hillsborough County, and the Superintendent of Schools of Hillsborough County.

Plaintiffs claimed, on behalf of all three classes, that the test or testing program was racially biased and/or violated the equal protection clause of the Fourteenth Amendment of the Constitution of the United States. Furthermore, the plaintiffs contended that the schedule of implementation did not provide them with adequate notice of the requirements or allow them adequate preparation time, and therefore constituted a violation of the due process clause of the Fourteenth Amendment to the United States Constitution. This claim was also advanced on behalf of all three classes. Finally, the plaintiffs claimed that the use of the SSAT-II to classify and group students in need of remediation had resulted in resegregation of the public schools in violation of the Fourteenth Amendment. This claim was advanced on behalf of all black students throughout the State and, specifically, those in the Hillsborough County Schools (i.e., plaintiffs in the second and third classes described above). The plaintiffs requested the District Court to rule that requiring a student to pass the SSAT-II as a prerequisite for a standard diploma is a violation of the equal protection and due process clauses of the Fourteenth Amendment to the United States Constitution. In addition, the plaintiffs requested the court to restrain the Department of Education from instituting this graduation requirement, to order that their scholastic records be cleared of any mention of failures on the SSAT-II, and to prohibit utilization of SSAT-II results in structuring remedial classes.

In a ruling handed down in July 1979, the court reviewed the past history of segregation in the Florida schools and the results of testing to date, and found that for black twelfth-grade public school students throughout the State, and specifically for such students in Hillsborough, "past purposeful discrimination . . . is perpetuated by the test and the diploma sanction" (Debra P. v. Turlington). The court declared that the "utilization of the SSAT-II in this present context as a requirement for the receipt of a high school diploma is a violation of the equal protection clause of the Fourteenth Amendment" (Debra P. v. Turlington).

In reviewing the issues of whether adequate notice of the graduation requirement was afforded the plaintiffs and whether sufficient time was allowed for preparing to meet the requirement, the court found that, given the schedule according to which the Department of Education implemented the program, ". . . the inadequacy of the notice provided prior to the invocation of the diploma sanction, the objectives, and the test is a violation of the due process clause" (Debra P. v. Turlington).

The third claim of the plaintiffs concerned the use of the SSAT-II results in structuring remedial classes; the plaintiffs asserted that such classes constituted resegregation of the public schools. The court found that while, in fact, remedial classes instituted for students failing the SSAT-II were disproportionately composed of black students, the purpose of the compensatory education is to assist these students in remedying their deficiencies. Hence, even though the provision of compensatory education for students who have failed the SSAT-II may result in partial resegregation, ". . . the use of SSAT-II results in assigning students to remedial classes is intended to remedy the present effects of past discrimination through better educational opportunities" (Debra P. v. Turlington). Thus the court found that this use of SSAT-II results was not a constitutional or statutory violation.

The court also reviewed evidence regarding the content and construct validity of the test, declaring that, "The court is satisfied that the skills objectives of the Florida test are adequately evaluated by the test items and that the test has adequate content validity . . . (and) has adequate construct validity" (*Debra P. v. Turlington*). With respect to cultural bias, the court concluded, "While some of the questions do seem to have factual settings unfamiliar to certain racial groups, the court is of the opinion that this distraction is minimal and unpervasive. The court is not convinced by the Plaintiff's evidence that the test or any item should be invalidated for racial or ethnic bias (*Debra P. v. Turlington*). Nonetheless, the court declared that, "Until the 1982-83 school year . . . (instituting the Functional Literacy Test as a graduation requirement) is a violation of the equal protection clause . . . as to those Plaintiffs in Classes B and C" and that the "schedule for the implementation of . . . (the Functional Literacy Test) is a violation of the due process clause . . ."; as a result, "The Defendents are enjoined from the use of the functional literacy examination . . . as a requirement for high school graduation until the 1982-1983 school year" (*Debra P. v. Turlington*).

Goals and Purposes

General goals. The primary goal of the Educational Accountability Acts of 1971 and 1976 is to clarify the responsibilities of all agencies involved in the operation and management of public schools in the State of Florida. As created by this legislation, the Florida Statewide Assessment Program is designed to provide information needed for state-level decisions.

Specific purposes. The specific purposes of the 1976 Educational Accountability Act include providing "a system of accountability for education in Florida which guarantees that each student is afforded similar opportunities for educational advancement without regard to geographic differences and varying economic factors" and providing "information for educational decision-makers at the state, district, and school levels so that resources may be appropriately allocated and the needs of the system of public education met in a timely manner" (as cited in SDE, 1977, p. 2). The statewide assessment was designed to accomplish the latter purpose of providing such information. In addition, the testing program is also intended to:

(a) Assist in the identification of educational needs at the state, district, and school levels.

(b) Assess how well districts and schools are meeting state goals and minimum performance standards.

(c) Provide information to aid in the development of policy issues and concerns.

(d) Provide a basis for comparisons among districts and between districts, the state, and the nation, where appropriate.

(e) Provide data which can be used to aid in the identification of exceptional programs or processes (cited in SDE, 1977, p. 8).

In the 1976 Educational Accountability Act, the legislature stipulates that local districts must prepare graduation standards that include State standards, and that these must apply to all students beginning with the class of 1979. In particular, the State standards to be met are "mastery of the basic skills and satisfactory performance in functional literacy as determined by the State Board of Education" (as cited in SDE, 1977, p. 15). The Board decided to determine whether a student met these requirements on the basis of the results of two tests: the eleventh-grade statewide test of minimum performance standards and a functional literacy test. Thus, an additional purpose served by the eleventh-grade test administered as part of the statewide assessment is to provide information to determine whether a student has met a graduation requirement. The Functional Literacy Test was created in order to determine whether a student has met the second prerequisite to a diploma established by the legislature in 1976.

Competencies

In response to the 1976 EAA, the Department of Education prepared minimum performance standards in reading, writing, and mathematics. The standards are broad performance objectives, similar in format to the "milestone objectives" used in the 1976-77 statewide assessment and reflect an emphasis upon basic skills; each standard is composed of specific skills. See Table 2 for the eleventh-grade standards in reading, writing, and mathematics; standards for grades 3, 5, and 8 in these same areas are very similar.

TABLE 2

Examples of Minimum Performance Standards for Grades 3, 5, 8, and 11 in Reading, Writing, and Mathematics

(These standards as well as those for grades 3, 5, and 8 were approved by the State Board of Education in April 1977 for the 1977-78, 1978-79, and 1979-80 school years.)

Reading Standards

#A - The student will acquire a basic vocabulary as determined by a specified word list.

#B - The student will determine word meaning from the way the word is used in a passage.

#C - The student will determine word meaning from a knowledge of word parts as used in a given context.

#D - The student will determine whether different selections have similar meanings.

#E - The student will determine the main idea of a message.

#F - The student will find information in a message.

#G - The student will determine the causes and effects of events and actions.

#H - The student will determine the logical generalizations which can be drawn from a message.

#I - The student will recognize fantasy, fact, and opinion in a message.

#J - The student will recognize irrelevant and invalid statements.

#K - The student will follow oral and written directions.

#L - The student will identify appropriate sources for needed information.

#M - The student will use appropriate reference skills.

Writing Standards

#A - The student will compose grammatically correct sentences.

#B - The student will organize objects and information into logical groupings and orders.

#F - The student will fill out common forms.

#G - The student will spell correctly.

TABLE 2 (continued)

#C - The student will write a paragraph expressing ideas clearly.

#D - The student will write for the purpose of supplying necessary information.

#E - The student will write letters and messages using commonly accepted formats.

#H - The student will punctuate correctly.

#I - The student will capitalize correctly.

#J - The student will write legibly.

Mathematics Standards

#A - The student will count quantities.

#B - The student will read and write numerals.

#C - The student will round numbers.

#D - The student will put numbers in order.

#E - The student will determine equivalent forms of fractions, decimals, and percents.

#F - The student will add whole numbers.

#G - The student will subtract whole numbers.

#H - The student will multiply whole numbers.

#I - The student will divide whole numbers.

#J - The student will add and subtract fractions.

#K - The student will multiply fractions.

#L - The student will add and subtract decimals.

#M - The student will multiply and divide decimals.

#N - The student will find percentages.

#O - The student will measure time, temperature, distance, capacity, and weight.

#P - The student will identify geometric figures and shapes.

#Q - The student will identify the value of coins and bills.

#R - The student will determine the information needed to solve a problem.

#S - The student will estimate solutions by rounding.

#T - The student will solve real-world problems involving whole numbers.

#U - The student will solve real-world problems involving fractions, decimals, and percents.

#V - The student will solve money problems.

TABLE 3

Standards and Skills Measured by the
Florida Functional Literacy Test

(These standards were approved by the State Board of Education in April 1977 for the 1977-78, 1978-79, and 1979-80 school years.)

There are two standards for this test, communications and mathematics. The skills comprising these standards are listed below:

Communications

1. The student will, in a real-world situation, determine the main idea inferred from a selection.
2. The student will, in a real-world situation find who, what, where, which, and how information in a selection.
3. The student will, in a real-world situation, determine the inferred cause and effect of an action.
4. The student will, in a real-world situation, distinguish between facts and opinions.
5. The student will, in a real-world situation, identify an unstated opinion.
6. The student will, in a real-world situation, identify the appropriate source to obtain information on a topic.
7. The student will, in a real-world situation, use an index to identify the location of information requiring the use of cross-references.
8. The student will use highway and city maps.
9. The student will include the necessary information when writing letters to supply or request information.
10. The student will complete a check and its stub accurately.
11. The student will accurately complete forms used to apply for a driver's license, employment, entrance to a school or training program, insurance, and credit.

TABLE 3 (continued)

Mathematics

1. The student will determine the elapsed time between two (2) events stated in seconds, minutes, hours, days, weeks, months, or years.

2. The student will determine equivalent amounts of up to one hundred dollars ($100.00) using coins and paper currency.

3. The student will determine the solution to real world problems involving one (1) or two (2) distinct whole-number operations.

4. The student will determine the solution to real-world problems involving decimal fractions or percents and one (1) or two (2) distinct operations.

5. The student will determine the solution to real-world problems involving comparison shopping.

6. The student will determine the solution to real-world problems involving rate of interest and the estimation of the amount of simple interest.

7. The student will determine the solution to real-world problems involving purchases and a rate of sales tax.

8. The student will determine the solution to real-world problems involving purchases and a rate of discount given in fraction or percent form.

9. The student will solve a problem related to length, width, or height using metric or customary units up to kilometers and miles, conversion within the system.

10. The student will solve a problem involving the area of a rectangular region using metric or customary units.

11. The student will solve a problem involving capacity using units given in a table (milliliters, liters, teaspoons, cups, pints, quarts, gallons), conversion within the system.

12. The student will solve a problem involving weight using units given in a table (milligrams, grams, kilograms, metric tons, ounces, pounds, tons), conversion within the system.

13. The student will read and determine relationships described by line graphs, circle graphs, and tables.

Beginning in 1976, the Department developed drafts of standards and skills and submitted these for review by educators in districts across the state. The Department then revised the standards and skills and submitted them for approval in April 1977 to the State Board of Education. According to the 1976 legislation, the Board is to approve the standards for a period of not less than three, or more than five years. In April 1977, the Board approved the minimum performance standards.

The Department also undertook the task of specifying the standards and skills to be measured on the Functional Literacy Test. Department of Education staff based the skills assessed in this test on those developed for the eleventh-grade Basic Skills Test, selecting those skills having the most practical application. These competencies or skills were organized under two standards, communication and mathematics; for a complete listing of the skills, see Table 3. In April 1977 the Board of Education also approved the standards and skills for the Functional Literacy Test.

Standards and Standard Setting

The minimum performance standards or broad objectives developed by the State Board of Education in April 1977, for grades 3, 5, 8, and 11, were first assessed in the 1977-78 statewide assessment. Criteria for determining whether students had mastered the minimum standards were developed by the Department of Education. The criteria prepared by the Department were also used to evaluate student performance on the second part of the eleventh-grade test, the Functional Literacy Test.

For the 1977-78 assessment, the Department set the desired level of performance for grades 3, 5, 8, and 11 at mastery of all the minimum performance standards. As described above, each minimum standard is similar to a broad performance objective and is, in turn, broken down into skills. Test items correspond to these skills. Criteria for mastery used during the 1977-78 assessment related both to skills and items. According to the Department, a student had mastered a standard if he had mastered at least one-half of the skills comprising the standard and had also answered at least 70% of the items measuring that standard. The Department specified that mastery of a skill was related to the number of items measuring that skill (e.g., to master a skill measured by one, two, or three items, all items must be answered correctly). These criteria, related to both skills and items, also applied, during the 1977-78 assessment year, to the Functional Literacy Test.

In August 1978 the State Board of Education changed the criteria for passing both the eleventh-grade Basic Skills Test and the Functional Literacy Test, as a result of testimony from citizens regarding the testing program. The Board stipulated that students were expected to master the standards assessed on both tests, but related mastery of a standard to the number of items measuring that standard. For example, on the eleventh-grade Basic Skills Test, if there are ten questions measuring a particular standard, a student must answer at least seven correctly in order to demonstrate mastery; if there are 20 questions measuring a standard, answering at least 14 correctly is considered evidence of mastery. The Board also tied mastery of the communications and mathematics standards of the Functional Literacy Test to answering a minimum number of questions correctly. For example, if there are 55 questions measuring a standard, a student must answer at least 39 correctly in order to demonstrate mastery.

In discussing both how the original standards were determined and the basis for the revisions made by the State Board of Education, the Department of Education identified five factors to be taken into account in classifying a student as a master or non-master: "(1) the probability that a student could guess enough answers to achieve the skill, (2) the probability that a student has the skill but makes an occasional careless error, (3) the philosophy that a student who has mastered a skill should be able to do it repeatedly, (4) the possibility that a student may have the skill but be so unfamiliar with a particular form of a test item that it is answered incorrectly, and (5) practical considerations of length of the test and time required to complete it" (SDE, 1979, p. 47). In setting standards, the Department sought to minimize the risk of misclassification, particularly with respect to borderline students, and the standards adopted reflect this concern.

At the Board's request, the Department of Education also rescored the Functional Literacy Tests administered in October 1977 using the revised standards, and found that less than 400 students who had previously failed the test could now be designated as masters.

Target Groups and Testing Schedule

The provisions of the 1976 act call for the statewide assessment of grades 3, 5, 8, and 11. Testing all students in grades 3 and 5 would provide a measure of within-school growth, according to the Department of Education, while the eighth grade was selected because it has traditionally been a target group for state-sponsored testing. The eleventh grade was chosen because test data could be used to assist students with deficiencies in basic skills, and yet still provide some indication of the impact of secondary education.

The legislature did not specify when the statewide tests were to be administered. Assessments conducted after the adoption of the new minimum performance standards in 1977 were administered according to a schedule first introduced during the 197 -76 assessment. Both the 1977-78 and 1978-79 assessments were conducted in October of the school year, as were the 1975-76 and 1976-77 assessments, so that results could be used during the school year. The Functional Literacy Test was first administered along with the Basic Skills Tests to the class of 1979 in October 1977. Students failing one or both tests could retake them in October 1978 and April 1979. Students in the class of 1980 and thereafter will have four opportunities to take the tests before graduation: in the spring and fall of both their junior and senior years.

Test Instruments

As a result of the 1976 Educational Accountability Act, four assessment instruments were developed, each measuring the minimum performance standards in mathematics, reading, and writing for each one of the four grades specified in the act. The test for third-graders is printed on a machine-scorable booklet and has two sections on mathematics and two sections covering communications skills. Students in the fifth, eighth, and eleventh grades mark their answers on separate sheets. Eleventh-graders receive two booklets, one containing the Basic Skills Test and the other, the Functional Literacy Test.

The third- and fifth-grade tests resemble the assessment instruments used in the 1976-77 statewide assessment. In this assessment, all third- and fifth-graders were tested in reading, writing, and mathematics. The minimum performance standards for these grades were based upon the objectives developed for the 1976-77 assessment, and therefore many of the test items developed for this assessment were included in the 1977-78 tests. During the 1975-76 school year, the Department of Education had contracted with Dade County educators to write test specifications for both the 1976-77 and future statewide assessments. These specifications were revised and used to generate additional items for the third- and fifth-grade tests prepared for the 1977-78 assessment. Once the items were prepared, test review committees composed of teachers, district curriculum specialists, and measurement experts reviewed the items for bias (e.g., racial, ethnic, sexual), appropriateness of distractors, match between skills and content, readability level of the items and instructions, and format. Based upon this review, Department staff revised the test items as appropriate. See Table 4 for the number of standards, skills, and items for the third- and fifth-grade tests.

The eighth-grade test was prepared by Florida State University under contract to the Department of Education. Using test item specifications prepared previously, staff from the university developed items, which were then submitted to teachers across the State for review using the criteria described above. The items were also field-tested throughout the State and were submitted for a second review to educators. See Table 4 for the number of standards, skills, and items on the eighth-grade test.

The Department also contracted with the University of West Florida and the University of South Florida to prepare, respectively, the communications and mathematics sections of the eleventh-grade Basic Skills Test. Once again items were prepared based on specifications and were reviewed by educators across the State. Field-testing occurred in November 1976.

TABLE 4

Number of Standards, Skills, and Items of
Third-, Fifth-, Eighth-, and Eleventh-Grade Tests
and the Functional Literacy Test

(from SDE, 1978b, p. 3)

N.B. Under the 1976 Educational Accountability Act, the Commissioner is directed to establish minimum performance standards in reading, writing, and mathematics. Moreover, these standards are to be approved for a period of not less than three years and not more than five years.

Reading

Grades	Standards	Skills	Items
3	9	11	59
5	10	17	90
8	10	17	85
11	10	13	69

TABLE 4 (continued)

Writing

Grades	Standards	Skills	Items
3	4	5	28
5	5	9	51
8	7	14	75
11	4	6	32

Mathematics

Grades	Standards	Skills	Items
3	8	13	59
5	15	20	93
8	16	22	109
11	8	13	65

Eleventh-Grade Functional Literacy Test

There are two standards assessed--communications and mathematics. The communications standard consists of reading and writing skills (from SDE, 1978b, p. 3).

(These standards are subject to the same provisions regarding the period for which they are approved as the minimum standards for grades 3, 5, 8, and 11.)

Standard	Skills	Items
Communications	11	58
Mathematics	13	59

The Functional Literacy Test was developed in conjunction with the eleventh-grade Basic Skills Test. Department staff prepared draft items and contracted with Educational Testing Services (ETS) to develop the final form of the test. Based upon the draft items and verbal and written guidelines provided by the Department, ETS wrote items, which were field-tested in March 1977 in five counties in Florida. In addition, the Department leased approximately a dozen items from the Adult Performance Level Test marketed by American College Testing. Following the field test, the Department again contracted with ETS to write Functional Literacy test specifications to permit additional items to be written for future test forms.

The Functional Literacy Test was first administered in October 1977, along with the Basic Skills Tests for grades 3, 5, 8, and 11. For the number of skills, standards, and items on the Functional Literacy Test and the eleventh-grade Basic Skills Tests see Table 4.

These instruments were revised for use in the 1978-79 statewide assessment. Task Forces comprised of educators from across the State reviewed the test items and added new items which had been field-tested in the 1977-78 assessment. The Department of Education also contracted with National Evaluation Systems, Inc. to produce 240 additional items for the Functional Literacy Test, which were field-tested in spring 1978. These items were used as replacement items in the 1978 and 1979 Functional Literacy Tests.

Following both the 1977-78 and 1978-79 assessments, the Department of Education intensively reviewed findings with respect to the content validity, reliability, and item discrimination power of the tests. Among the studies conducted by the Department, staff members reviewed the item specifications and procedures used to construct the tests to assess the validity of the tests. With respect to reliability and item discrimination, Department staff used various indices, including the Kuder-Richardson Formula 20 (e.g., calculated for each subject area for grades 3, 5, 8, and 11) and phi coefficients, to derive numerical estimates. These estimates were based on random samples drawn from all grade levels following both assessments.

For a complete description of the procedures and indices used in evaluating the technical characteristics of the tests, see the 1977-78 and 1978-79 Technical Reports prepared by the Department of Education. The results of these studies suggest, according to the Department, that the instruments and items have adequate content validity, reliability, and item discrimination power.

Test Administration

Both the 1977-78 and 1978-79 assessments were administered in October. Each school district appointed a district coordinator, who is responsible for assisting the schools to prepare for testing, controlling all test materials, and training school coordinators. District coordinators attended workshops sponsored by the Department. School coordinators are responsible for controlling test materials, training test administrators, and supervising test administration. The responsibilities of the district and school coordinators and of test administrators are outlined in manuals prepared by the Department of Education for local districts.

All tests are administered during a two-week period. Local districts determine when and under what circumstances (e.g., classroom, large group setting) tests will be given. All tests are untimed. Typically, students in grades 3, 5, 8, and 11 require two days to complete the test, one day for each section. Eleventh-grade students usually require a day to complete the Basic Skills Test and a day to take the Functional Literacy Test.

Precautions taken to maintain the security of the basic skills tests include delivering the materials close to the testing date, and destroying all test materials following administration, with the exception of a single copy kept by each school principal for reference. Additional precautions are taken to maintain the security of the Functional Literacy Test. For example, each booklet is individually sealed and numbered. Booklets are shipped in sealed packets, and all test materials are destroyed following test administration. Irregularities which occur during test administration are reported to the Department of Education and provisions for handling them are determined jointly by the Department and the district.

Scoring and Analysis

All scoring of assessment tests is awarded to an outside contractor on the basis of a competitive bid. For the 1977-78 and 1978-79 assessments, Westinghouse Learning Corporation has provided scoring services. Tests are machine-scored and results are reported in terms of the standards, skills, and items mastered. This information is reported at the school, districts, and State levels.

Reporting/Dissemination

The contractor is also responsible for providing local districts with four major reports: a Student Report for grades 3, 5, 8, and 11; a Listing of Achievement Report; District Reports by skill and by item; and an item or foil analysis report.

Teachers receive an individual student report for each child in the class. The report indicates which standards and skills were mastered and how the student responded to each test item (i.e., correctly or, if incorrectly, which response was chosen). The Student Report for the eleventh grade also includes the results of the Functional Literacy Test. For the Functional Literacy Test, no information on item achievement is reported, in order to maintain test security; the report indicates whether the student passed the test and which individual skills he mastered.

Teachers and principals receive the Listing of Achievement Report. Results are reported by class, school, and districts. The report indicates how well a given class, school, and district did with respect to mastery of standards, skills, and items.

There are three District Reports, one containing information on school skill achievement, one containing information on school item achievement, and one containing information on school standard achievement. District Reports contain information of use to administrators. All reports list all of the schools in a given district; one lists the percentage of students mastering each skill, one lists the percentage mastering each test item, and the third lists by school the percentage of students who have mastered each standard. These reports also list the score information for the district and State.

Districts also receive an item or foil analysis report for each school in the district. This report indicates, for each item, the percentage of students selecting each choice. The Department of Education recommends that teachers and curriculum specialists use this information for diagnostic purposes.

Assessment results are reported to districts usually within a month of test administration. The results of the statewide assessments become part of a student's academic record, subject to State rules and procedures.

Provisions for Special Populations

Under the 1978 revisions to the 1976 Educational Accountability Act, the legislature directed the State Board of Education to establish special graduation requirements for educable mentally retarded, trainable mentally retarded, deaf, specific learning disabled, and emotionally handicapped students. Upon meeting these requirements, and those established by the local school board, a student is entitled to receive a special diploma. For example, in order to receive a special diploma, a deaf student must master the eleventh-grade special minimum performance standards, developed for hearing impaired students by the Department of Education and adopted by the State Board in 1977. The student must also complete the minimum number of course credits specified by the local school board.

In these same revisions, the legislature also directed the Board of Education to modify the administration procedures for the eleventh-grade tests (i.e., the Basic Skills and Functional Literacy Tests) so that any student with a handicap or learning disability who wants a standard high school diploma may attempt to meet the requirements. In accordance with this directive, the State Board specified both the accepted modifications and the populations eligible to request these modifications. The Board described five acceptable modifications, which include flexible scheduling (i.e., testing in several brief sessions rather than at one time), and the use of auditory aids (i.e., except in cases where reading skills are being tested, a student may use tape recorded versions of portions of the test in addition to the printed test materials). The Board specified the population for which one or more of the modifications are appropriate. For example, mentally retarded students may request flexible scheduling and setting as well as modifications in the recording of answers; the emotionally handicapped may request both these modifications as well as revised format. Members of these populations who pass both eleventh-grade tests and who meet all local requirements are eligible to receive a standard diploma.

With respect to the statewide assessments, special populations are exempted from participation either on a group or individual basis. The groups not tested on a regular basis are the trainable mentally retarded and the profoundly mentally retarded. Visually impaired students are tested regularly, using Braille or large-print versions of the tests. Members of the following special populations may be exempted on an individual basis: educable mentally retarded, hearing impaired, physically handicapped, emotionally disturbed, speech impaired, specific learning disabled, students who have been enrolled in an English-speaking public school less than two years, and students who have a temporary disability of either a physical or emotional nature. The test administrator is responsible for reporting the names of students to be exempted to the school coordinator. Students who elect to be exempted are not eligible to receive a regular diploma. Students who are normally exempted may request to take the eleventh-grade tests. If they pass the tests and meet all local requirements for graduation, they will receive a regular diploma.

Use and Implications of Test Results

Consequences to students. In the 1976 Educational Accountability Act the legislature directed local school boards to establish a "comprehensive program for pupil progression which shall be based upon an evaluation of each pupil's performance, including how well he or she masters the minimum performance standards approved by the state board" (cited in SDE, 1977, p. 15). Further, the legislature recommended to school boards that, in designing criteria for promotion, "particular emphasis . . . be placed upon the pupil's mastery of the basic skills, especially reading, before he or she is promoted from the third, fifth, eighth, and eleventh grades" (cited in SDE, 1977, p. 15). Hence, although the State does not mandate that assessment results be used to determine promotion from grades 3, 5, 8, and 11, it does stipulate that districts establish promotion criteria and that these criteria include mastery of the performance standards. Local districts are also requested to provide such assistance to students in grades 3, 5, and 8 who do not master the minimum performance standards.

Students who fail the eleventh-grade Basic Skills Test must receive remediation on those standards they did not master. The State requires that the district evaluate the student on these standards using locally determined procedures following remediation. The teacher must also sign a statement certifying that remediation has been provided. If a student fails the Functional Literacy Test, the district is required to provide remediation. The student must take the test over and pass it in order to graduate.

Students who fail to meet these requirements, but are not subject to requirements for special populations, will receive a certificate of completion. After receiving only a certificate of completion as a result of the failure to pass one or both tests, a student can qualify for a standard diploma by meeting the test requirements.

Consequences to programs. One consequence for programs as a result of the 1976 act is that schools are categorized as deficient if the average scores of students across all standards is 70% or less. If a school is so characterized, it becomes a candidate to receive an in-depth program review by Department staff, which may then result in program revision. Also, in legislation passed since this act, Florida lawmakers have appropriated funds for the institution of compensatory or remedial education programs at the local level and mandated that districts offer students receiving a Certificate of Completion the option of remaining in high school for a thirteenth year in order to receive remediation. Funds appropriated for compensatory education in 1977 totaled $10 million, and in 1978 $26.5 million. In 1979 legislation was passed that requires the districts both to incorporate basic skills training into adult education programs and to offer to students who fail the eleventh-grade tests the option of a thirteenth year in high school, to be taken on a full- or part-time basis. The intent of this legislation is to guarantee all citizens of Florida the opportunity to master the standards and skills considered by the State to be necessary for survival in modern society.

Program Resources and Cost

General program staffing. The Student Assessment Section of the Department of Education is responsible for administering the statewide assessments. There are 12 full-time staff members in this section including clerical staff and two data analysts. In addition, there are usually three to four part-time employees on the staff. Staff in other sections of the Department provide expertise (e.g., in the form of technical assistance) in related areas including curriculum and remediation.

Approximate costs and funding sources. Major costs resulting from enactment of the 1976 Educational Accountability Act included the development of the eighth-grade Basic Skills Test and the Functional Literacy Test. The total budget for the 1977-78 statewide assessment program was $1,244,492, and for the 1978-79 assessment, $1,369,171. These figures include personnel costs and contracts with outside agencies. For grades 3, 5, 8, and 11, the assessment instruments cost approximately $1.20 to administer, while the average cost of developing a test item is $125.

The statewide assessment program is supported entirely by State funds appropriated by the Legislature in the annual budget for education. In addition, since 1977 the legislature has appropriated funds for compensatory education programs. In 1977 $10 million was appropriated for this purpose; in 1978, $26.5 million; and in 1979, $28.3 million will be spent on remediation.

Program Evaluation

Florida's testing program was reviewed each year for the first three years of its operation by the House and Senate Education Committees of the Florida legislature. For these reviews, testimony was solicited from key figures associated with the program (e.g., Department staff). Furthermore, although bills have been introduced to eliminate the program, none have passed.

In addition to the annual legislative reviews of the program, two other studies of various aspects of the program have been conducted. One was conducted by the Florida Task Force on Educational Assessment Programs, which was appointed by the Commissioner, and focused on the Functional Literacy Test. The other was conducted by a panel under contract to the National Education Association (NEA) and the Florida Teaching Profession--NEA.

The Florida Task Force on Educational Assessment Programs was created by the Commissioner as a result of hearings conducted in August 1978. At that time the Florida Cabinet, sitting as the State Board of Education, heard testimony from educators and citizens on various aspects of the testing program. The State Board of Education decided on the basis of these hearings to continue the statewide testing program but to change the scoring system and to create a Task Force to study the program. The Board directed the commissioner to appoint the members, who included the Secretary of State and educators and citizens from across the state. The Task Force began its work in the fall of 1978, and decided to present its final report in two parts. The first part of the report focuses on the implementation of the program; the second part focuses on the results of the testing which occurred in the fall of 1978. The Task Force issued the first part of the report in February 1979, after collecting information from three sources: the testimony of specialists, public hearings conducted in a number of counties throughout the State, and short surveys and studies. Testimony was heard from recognized authorities in areas such as testing and measurement and remediation, and from members of the Department of Education.

In the first report issued, the Task Force reviewed the schedule for implementation and obstacles that had arisen, and made certain recommendations to the Commissioner. These recommendations were directed toward improving communication and understanding among audiences involved in or affected by the testing program, introducing instruction in and testing of basic skills in earlier grades, and improving the Functional Literacy Test. The Commissioner weighed the recommendations, accepting some but not all. Since some of the recommendations were steps the Department had already taken, the State Board of Education decided that an independent study of the testing program was not needed, and hence the second report of the Task Force will not be issued.

The second study of the Florida testing program, entitled The Florida Accountability Program: An Evaluation of Its Educational Soundness and Implementation, was conducted by a panel under contract to the Florida Teaching Profession--NEA and the National Education Association. A five-member panel, headed by Dr. Ralph Tyler, was engaged to study the broad question of whether the accountability legislation of 1971 and 1976 and its implementation "have improved education in Florida" and to determine ". . . what effects such policies have had on students, the public, and the profession" (Tyler et al., 1978, p. 17). Panel members included a university professor and teachers from Florida. Among the specific issues addressed by the panel were the development of objectives, program planning, and the use of test scores.

In its report, the panel found that most of the accountability legislation was "praiseworthy," but judged the particular "strategy" employed for achieving accountability (i.e., the introduction of minimum competency testing as linked to graduation) to be "seriously faulty." In the estimation of the panel, this strategy "once more takes primary responsibility out of the hands of the local school" (Tyler et al., 1978, p. 14). The panel recommended that the Department put its efforts into assisting local districts to identify learning problems, and into developing appropriate programs and in this may encourage "school-based management." The panel was also critical of the implementation of the legislation and concluded: "It appears that the inadequacies are due largely to excessive haste in instituting the program and failure to make maximum efforts to communicate with and involve all those who are responsible for making the program work and those who are seriously affected by it" (Tyler et al., 1978, p. 14). According to the Department of Education, these findings are not supported by the evidence, which suggests that the program has a broad base of support among Florida's citizens. For an account of the positive outcomes and consequences of program implementation, see Fisher, 1978, pp. 24-38.

Future Directions

With one exception, the program as originally mandated has been implemented. As a result of the court ruling handed down in 1979 in Debra P. v. Turlington, the state will not link passing the Functional Literacy Test to graduation until the 1982-83 school year. No other modifications in the statewide testing program are planned.

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HILLSBOROUGH COUNTY, FLORIDA

In 1971 the Florida Legislature passed the Educational Accountability Act in order to introduce the principle of accountability into the operation and management of the public schools. Created under this act, the Florida Statewide Assessment Program was intended to monitor the progress of students with respect to statewide educational objectives. In 1976 the legislature passed a new version of the Accountability Act in which the Commissioner was directed to prepare minimum performance standards in reading, writing, and mathematics and to test all students in grades 3, 5, 8, and 11 on these standards. In addition, the legislature established statewide graduation requirements, mandating that, beginning with the class of 1979, all students must pass a Functional Literacy Test and demonstrate mastery of the eleventh-grade minimum performance standards in order to receive a high school diploma. Both tests are administered as part of the annual statewide assessment.

The legislation which mandated these testing programs made local school districts responsible for organizing remediation programs. The State Compensatory Education Act of 1977, however, provides special funding for such programs. The Hillsborough County School Board organized and received funding for such a program beginning in the 1977-78 school year.

In November 1977 Hillsborough County instituted remedial programs in basic skills and functional literacy for grades 10 and 11. During the 1978-79 school year, remedial programs for grades 7, 8, 9, and 12 were instituted. In order to identify students in need of remediation, the county uses the statewide assessment results for grades 8 and 12, the Comprehensive Test of Basic Skills (CTBS) and locally developed criterion-referenced tests. All students in grades 6-12 are screened for deficiencies. In addition, the county developed pre- and posttests for use in compensatory education classes in grades 7-10. The county also used Part II of the State assessment test for grades 11 and 12.

Legislative and Policy History

Policy history. In 1971 the Florida legislature passed the Educational Accountability Act, designed to introduce the principle of accountability into the operation and management of the public schools. Under this act, the legislature created the Florida Statewide Assessment Program. In 1976 the legislature reviewed and systematized the accountability legislation that had been enacted to date and prepared a new Accountability Act. This act contains provisions relating to a number of topics including district planning, cost accounting, and statewide testing. Under this act, the legislature directed the Commissioner to prepare minimum performance standards in reading, writing, and mathematics for grades 3, 5, 8, and 11, and to monitor the performance of students in these grades with respect to the minimum standards in future statewide assessments. The legislature also stipulated that local districts prepare a Pupil Progression Policy with standards for graduation and, furthermore, that these locally developed standards must "include, but not be limited to, mastery of the basic skills and satisfactory performance in functional literacy as determined by the State Board of Education" (SDE, 1977, p. 15). Beginning with the class of 1979, all students must pass both the Basic Skills Test and a Functional Literacy Test in order to graduate. Due to a court order in July 1977, however, the Functional Literacy Test cannot be used as a graduation requirement until the school year 1982-83.

In accordance with the provisions of the act described above, the Department of Education prepared minimum standards or objectives in reading, writing, and mathematics for the designated grades and submitted these for approval to the State Board of Education. The Board adopted these standards in April 1977. In late 1976, the Department also undertook the task of preparing a functional literacy examination for the eleventh grade. The objectives in reading, writing, and mathematics developed by the Department for the Functional Literacy Test were based upon those prepared for use in the statewide assessment of eleventh-graders. After writing the objectives for the Functional Literacy Test, the Department contracted with Educational Testing Service to develop and field-test items. Both the Functional Literacy Test and the tests based upon the minimum standards were first administered during the 1977-78 statewide assessment.

Under the 1976 act, local districts are required to develop their own standards for graduation as well as to see that all students meet the state-imposed standards. In addition, local districts are required to provide remediation to those students who do not master the minimum standards. In 1977, the legislature passed the State Compensatory Education Act that provided special funding for remedial programs. The Hillsborough County School Board applied for funding under this act and received support for their remedial program for the 1977-78 school year. Since the State of Florida is responsible for carrying out many of the activities associated with implementing minimum competency testing, including developing the tests and the scoring and reporting of results, this report on Hillsborough County will focus more upon the prime responsibility given to local districts under the 1976 Educational Accountability Act, that of providing remediation. Since 1977 Hillsborough County has developed a remedial program for grades 7-12 that focuses upon the minimum performance standards for grades 8 and 11.

Phase of implementation. All students in grades 3, 5, 8, and 11 were first assessed on the newly prepared minimum standards in October 1977. Eleventh-grade students also took the Functional Literacy Test for the first time during the same period as the statewide assessment. Hillsborough County instituted remedial programs in basic skills and functional literacy in the fall of 1977 for grades 10 and 11. During the 1978-79 school year, remedial programs for grades 7, 8, 9, and 12 were instituted. Designed for grades 7-12, the compensatory education program uses the results of the statewide assessment of grades 8 and 11 and results of locally developed tests in the other grades for screening students in need of remediation.

Associated litigation. In a class action suit filed in the Tampa Division of the U.S. District Court in October 1978, the School Board of Hillsborough County and the Superintendent of Schools were named as defendants along with the Commissioner of Education, the Florida State Board of Education, the Governor, the Secretary of State, and the Department of Education. The suit was brought on behalf of three classes of plaintiffs including all present and future twelfth-grade black students in public schools in Hillsborough County who had failed and would continue to fail the Functional Literacy Test. The plaintiffs advanced a number of claims concerning the institution of the Functional Literacy Test as a graduation requirement, including the contention that the State had not permitted students adequate time to prepare for the Functional Literacy Test. In a ruling handed down in July 1979, the Court addressed the State's right to institute such a requirement, finding that the State was entitled to mandate this requirement, but was at fault in imposing this requirement on such short notice in view of the past history of segregation in Florida's public schools. The Court enjoined the State from instituting the Functional Literacy Test as a graduation requirement until the 1982-83 school year. Although Hillsborough County was named in this suit, the ruling was directed to the State and, as such, did not touch upon the practices or policies of minimum competency testing in Hillsborough County. For a more complete account of the suit, see Minimum Competency Testing in the State of Florida (NES, 1979).

Goals and Purposes

Two major goals of the statewide assessment program are to provide information needed for state-level decisions and to "assist in the identification of educational needs at the state, district, and school levels" (SDE, 1977, p. 8). With respect to specific purposes, the results of both the eleventh-grade Basic Skills Test and the Functional Literacy Test are used to determine whether a student will graduate. The purpose of the compensatory education program instituted in Hillsborough County is to provide remediation for those students in grades 3, 5, and 8 who do not master the minimum standards, and for those eleventh- and twelfth-grade students who do not meet the graduation requirement. Testing, a key component of the compensatory education program, is used to identify in advance those students who may have difficulty mastering the minimum standards or passing the Functional Literacy Test. These students then receive additional drill in the requisite skills prior to taking the statewide assessment tests.

Competencies

In accordance with the provisions of the 1976 Educational Accountability Act, the Department of Education developed minimum standards or objectives in reading, writing, and mathematics for grades 3, 5, 8, and 11. These were approved by the Board of Education in April 1977. Each standard or broad objective is composed of specific skills. The Functional Literacy Test, for example, consists of two standards, communication and mathematics. There are 11 communications skills and 13 mathematics skills tested. In developing remedial programs for students who had not mastered the minimum standards or passed the Functional Literacy Test, Hillsborough County administrators decided to focus on those standards and skills listed in the *Minimum Student Performance Standards* for Florida Schools (SDE, 1979). For eleventh-grade students this meant providing remediation both in basic skills and in the skills tested on the functional literacy examination. For a listing of the minimum performance standards in reading, writing, and mathematics for grades 3, 5, 8, and 11, and the skills assessed on the Functional Literacy Test, see *Minimum Competency Testing in the State of Florida* (NES, 1979).

Standards and Standard Setting

Criteria for determining whether students in grades 3, 5, 8, and 11 had mastered the minimum standards were developed by the Department of Education and approved by the Board of Education. The Department also determined the standards for mastery of the standards assessed on the Functional Literacy Test.

For the 1977-78 assessment, the Department of Education defined satisfactory performance on the assessment instruments as mastery of all the minimum performance standards developed for a given grade. Mastery of a standard or broad objective was further defined in terms of skills and items. That is, in order to master a standard a student must master at least one half of the skills comprising that standard and answer correctly at least 70% of the items measuring the standard. Mastery of skill, in turn, is defined as answering a specified number of items correctly out of the total number of items that measure the skill. For the 1978-79 assessment, the Board of Education changed the criteria for determining whether eleventh-grade students had mastered the standards assessed on the Basic Skills Test and the Functional Literacy Test. Under the Board ruling of August 1978, mastery of the standards assessed for all grades was defined as correctly answering at least 70% of the items measuring each standard. For a complete description of the rationale behind and changes in the standards for the statewide assessment, see Minimum Competency Testing in the State of Florida (NES, 1979).

Administrators in Hillsborough County use the statewide assessment instruments, a commercially available test, and locally developed screening tests to identify students in grades 6-12 in need of remediation. In addition, the county has developed diagnostic pre- and posttests for use in compensatory education classes. While the State has specified standards for determining mastery of the standards and skills assessed, and the county uses these in identifying students to receive remediation, the county has also set standards for all locally developed instruments. For example, the county administers the Comprehensive Test of Basic Skills to all sixth-graders at the close of the school year. The county sets a cut- off score for this test which is based upon test results. Students whose scores fall below this cutoff score must attend summer school and enter a compensatory education class the following year. Most cutoff scores set were such that approximately the bottom 15% of the student population is eligible for the compensatory education program.

Target Groups and Testing Schedule

All students in grades K-11 are tested, either in the State or local testing programs. Students in grades 3, 5, 8, and 11 participate in the statewide assessment, and the statewide test results are used to identify eighth- and eleventh-grade students who need remediation. Results of the eleventh-grade Functional Literacy Test are also used to identify students requiring remediation. During the 1978-79 school year, the second year in which the Functional Literacy Test was administered, seniors who had failed the test the previous year were given two opportunities to take it again. In Hillsborough County seniors who did not pass the test were given remedial instruction in special classes.

Students in grades 6, 7, 8, 9, 10, and 11 take a screening test at the end of the school year. Results are used for placement in remedial classes for the following year.

Students in compensatory education classes in grades 6-12 also take pre- and posttests in order to ascertain mastery or to identify areas where more work is needed.

The statewide assessments in 1977-78 and 1978-79 were administered in October. Results can then be used during the same school year. Screening tests are usually administered in March of the school year in order to aid in the identification of students who will require remedial work during the next school year. Pre- and posttests are administered only in compensatory education classes at the beginning and end of the year. Results are used for diagnostic purposes.

Test Instruments

The county uses test instruments to identify students in need of remediation and to ascertain mastery of standards and skills in the compensatory education classes.

At the sixth-grade level, the county administers the Comprehensive Test of Basic Skills at the close of the school year to identify students who will receive remedial assistance in the seventh grade. The screening tests administered at the close of grades 7, 8, 9, 10, and 11 were developed by teachers in the county. The administrators selected teachers in the areas of mathematics, reading, and writing, and provided workshops on test construction. Administrators also reviewed the State tests and prepared item descriptions.

Using the standards and skills specified by the State and the item descriptions prepared by county personnel, the teachers developed items for the screening tests. The tests are similar in format to the statewide assessment instruments. The instruments were field-tested and administrators found that results were similar to those for the statewide assessment.

In addition to the screening tests, teachers developed pre- and posttests for use in the compensatory education classes in grades 7, 8, 9, 10, and 11. These tests also measure the standards and skills prepared by the State, but provide more diagnostic information to the compensatory education teachers.

Test Administration

All tests are administered by classroom teachers. The screening tests for the seventh and eighth grades require two class sessions per area (i.e., mathematics and communication), while the same tests for the ninth through twelfth grades require one class period per area. Irregularities are handled by the teachers administering the tests. With respect to the statewide assessment, the Department of Education requires each district to appoint a district coordinator. The district coordinator works with each school coordinator, who, in turn, supervises the test administrators. Classroom teachers also administer the statewide test. Each school appoints a Test Chairperson (school coordinator) who oversees the administration of the local criterion-referenced tests or the Comprehensive Test of Basic Skills.

Scoring and Analysis

The State is responsible for arranging for scoring of the statewide assessment. Both the screening tests and compensatory education pre- and posttests are machine-scored in the county.

Reporting/Dissemination

Each district in the State receives four types of reports on the statewide assessment results. These reports indicate the standards and skills mastered by classroom, school, district, and State as well as, for each item, the percentage of students who chose each possible answer. State reports are designed for teachers and school and district administrators. Test results become part of a student's permanent record.

Results of the screening tests and the pre- and posttests go to teachers, principals, school-based directors of instruction, and the assistant superintendent. Mastery of standards and skills is reported both for individual students and in terms of percentages of students. Results are entered upon a student's permanent record. In addition to test scores, the county reports on the progress of the compensatory education program as a whole, both to the State and to various audiences (e.g., teachers) within the district.

Use and Implications of Test Results

Consequences to students. Students who fail the CTBS (given at the end of sixth grade) or one of the locally developed screening tests (given at the end of grades 7, 8, 9, and 10) are classified as needing either extensive remediation or minimum assistance. Those students in grades 7-9 who require extensive help must go to summer school and into a compensatory education class the following year. For tenth- through twelfth-grade students, summer school is optional, but they must participate in compensatory education classes. At the beginning of the school year, all students in compensatory education classes take diagnostic tests. The results of these tests are used by the teacher to plan remedial instruction. In the eighth and eleventh grades the statewide assessment tests are also used to diagnose students' weaknesses and identify students in need of remediation. Students are evaluated periodically by teachers after being assigned to compensatory education classes and may exit from the class if proficiency in basic skills is demonstrated to the satisfaction of the teacher. Students who remain in class all year take a posttest for evaluation. All students are screened in the spring and placed in either compensatory education or regular classes the following year.

For students who fail the screening test but who are classified as needing minimum assistance, classroom teachers assign remedial work within the appropriate class (e.g., worksheets) and monitor progress.

Although the legislature stipulated in the 1976 Educational Accountability Act that all students must pass both the eleventh-grade Basic Skills Test and the Functional Literacy Test in order to graduate, and that the class of 1979 would be the first group subject to these requirements, under the ruling handed down in June 1979, the Functional Literacy Test will not become a graduation requirement until 1983. Students in the class of 1979 and subsequent classes, however, must still pass the Basic Skills Test in order to graduate.

Consequences to programs. Since the receipt of State funds for both the 1977-78 and 1978-79 school years, the county has instituted compensatory education classes in grades 7-12. In addition, classroom teachers provide remedial instruction for those students whose identified weaknesses are not severe enough to warrant placement in the special classes.

Provisions for Special Populations

The State has identified certain populations which are exempted from the statewide assessment and the state-imposed graduation requirements either on a group or on an individual basis. The State has also prescribed alternative requirements for some populations, which, upon completion of these, will receive the exceptional student diploma. With respect to the graduation requirements, the State does allow some modifications in the administration of the tests for members of any special populations who wish to take them. For a description of the special populations identified by the State, the alternative graduation requirements, and the modifications permitted in the administration of the eleventh-grade test, see Minimum Competency Testing in the State of Florida, (NES, 1979).

Since special populations are served in exceptional student programs, there are few members of such populations enrolled in the compensatory education classes. While these students do take the screening tests, remediation is provided in the context of their regular classes. Students may be exempted from these tests if the principal, who usually meets with the student's parents and teacher in such cases, so directs.

Program Resources and Costs

General program staffing. There is no information available on staffing for the program.

Approximate costs. The compensatory education program in Hillsborough County costs in excess of $5,000,000. Just over $3,500,000 are from noncompensatory dollars. The remaining expenditures are covered by funds requested from the State. These State funds are budgeted for direct instructional costs and program evaluation, and include salaries, employee benefits, purchased services, and materials and supplies.

Funding sources. Total funds budgeted for compensatory education program expenditures in Hillsborough County during the fiscal year 1978-79 were $5,684,695. Of this total, $2,058,529 were funds requested from the State. The remainder, $3,626,166, were expected expenditures from noncompensatory dollars.

Program Evaluation

Under the terms of the funds received from the State, the county is required to conduct an annual product evaluation of the remedial programs. Over the past two years the county conducted both a product and process evaluation designed to provide information to both county and State administrators. The product evaluation consisted of reviewing test scores on the pre- and posttests given in the compensatory education classes and administering the CTBS to students who had completed a year of remediation. Administrators found that all schools "had a statistically significant gain in objectives (math) achieved" on the posttests used in the compensatory education classes. With respect to the CTBS, administrators reported a "significant gain in CTBS math scores" and no significant change in reading and language scores on the CTBS.

County administrators also raised a variety of questions related to program implementation and the concerns of key audiences such as teachers and students. Data-gathering techniques included surveys and interviews. For example, interviews were conducted with teachers and students to discuss their general attitudes toward compensatory education. Administrators found that both groups agreed that the small classes and individualized instruction enabled many students to succeed in school for the first time. A survey of compensatory education teachers yielded the finding that teachers assigned to only one compensatory education class were less likely to want to continue teaching such classes than were teachers assigned to carry two or more remedial classes. Moreover, full-time compensatory education teachers wanted to teach one or two regular classes as well. In response to concerns raised by teachers regarding the need for comprehensive guidelines for the compensatory education program, administrators developed and disseminated materials. For a complete summary of the issues raised in the evaluation of Hillsborough's program and the major findings, see Jolly and Hilderbrand, 1979.

Future Directions

The process evaluation has resulted in several findings which suggest a possible course for future program development. A publication dealing with guidelines for program implementation was developed and disseminated to the respective schools and teachers, and a committee of school-based teachers and administrators was formed for making grading recommendations. In the future, efforts will be made to examine the differences in test scores in the various schools in order to determine whether or not these differences can be attributed to program differences or population differences.

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GEORGIA

In the State of Georgia, competency testing currently consists of two separate sets of activities which are soon to converge. First, the State Board of Education initiated a statewide testing program in 1971. During the first five years of the program, norm-referenced tests in reading, language, and mathematics were administered annually to all students in grades 4, 8, and 11. By 1976, criterion-referenced tests in reading, mathematics, and career development had been developed to replace the norm-referenced tests for grades 4 and 8. Criterion-referenced tests in communication skills and mathematics for grade 10 were added to the statewide testing program in the spring of 1978. Norm-referenced tests continue to be administered annually to a sample of students in grades 4, 8, and 11 in order to maintain a longitudinal data base comparing Georgia students to a national population sample.

Second, since 1975 the State Board of Education has been developing a program of statewide improvement of instructional programs (competency-based education) which includes a comprehensive planning process for local school systems, a policy of educational accountability, and a specific statement of requirements for high school graduation which includes 20 competency performance standards.

The statewide testing program and the competency-based education program are scheduled to come together in 1981, with the first administration of a statewide tenth-grade criterion-referenced basic skills test.

The tenth-grade basic skills test will replace the criterion-referenced tests in communication skills and mathematics which are currently in use and will be based upon a number of the 20 competency performance standards which have been designated as prerequisites for a high school diploma. Competency-based education, including both the new graduation requirements and a statewide assessment program based upon the competency standards required for graduation, will be fully implemented by 1983.

Legislative and Policy History

In 1969 the State Department of Education initiated the Georgia Assessment Project for the purpose of establishing educational goals for the State. An Advisory Commission on educational goals was appointed in

April 1969. The Commission, made up of Georgia educators, assessed social, economic, and political conditions, and made recommendations for educational goals to meet the challenges of those conditions. Phase I of the Project culminated with the adoption of Goals for Education in Georgia by the State Board of Education in March 1970.

As a first step in implementing those goals, the State Board of Education initiated a statewide testing program in July 1971, for the purpose of assessing the needs of students, assisting in the development and modification of curriculum, and helping classroom teachers meet the educational needs of each student. The program began with the use of norm-referenced tests in reading, language, and mathematics for all students in grades 4, 8, and 11.

In the following year, the Atlanta Assessment Project was initiated as part of Phase II of the Georgia Assessment Project funded by Title III monies. The purposes of the project were to translate the goals which had been identified by the Advisory Commission during Phase I into measurable performance objectives and to develop instruments to measure student progress toward those goals. The Atlanta Assessment Project developed more than 700 objectives for each of the 14 goals. National Evaluation Systems (NES) developed 3,500 test items distributed among 96 test forms to measure those objectives. The 96 criterion-referenced test forms were designed to measure the performance of sample populations of eleventh- and twelfth-grade students.

As a continuation of Phase II of the Georgia Assessment Project, the State Board of Education requested a proposal for the development, field-testing, and analysis of criterion-referenced tests in reading, mathematics, and career development for grades 4 and 8. The proposed project was for the purposes of modifying, as appropriate, the objectives of the Atlanta Assessment Project for use with fourth- and eighth-graders, and of developing test instruments to measure student progress toward those objectives. The proposal was prepared by a committee of Georgia educators in cooperation with the Educational Testing Service (ETS). The process of refining the objectives for the tests began in 1973.

In 1974 the General Assembly of the State of Georgia added the force of law to the testing programs which had been developed by the State Board of Education. The Adequate Program for Education in Georgia Act (APEG) mandates statewide annual assessments at a minimum of three grade levels. The law empowers the State Board of Education to adopt such instruments, procedures, and policies as deemed necessary to assess the effectiveness of the educational programs of the State. In addition, the law mandates that a readiness test be administered early during a child's first year in school.

The Adequate Program for Education Act also makes explicit the State's responsibility for providing all Georgia citizens an adequate educational opportunity, an educational program of high quality designed for personal development as well as career training, and a flexible program which meets each student's needs, interests, and abilities.

That legislation added a major impetus to the growth and formulation of policies relating to competency-based education. In response to APEG, the State Board of Education established the State Advisory Council for Instructional Services (SACIS) in March 1975, which in turn adopted a Master Plan for Improving Instruction in Georgia's Schools.

The Master Plan focused on five areas for action: the Learner, the Curriculum, the Staff, Instructional Resources, and Management. In the discussion associated with the Learner, SACIS recommended the adoption of a detailed procedure for determining students' needs which included the use of objective-referenced tests in reading, mathematics, and career development in the fourth and eighth grades, later to be supplemented by testing in the tenth grade.

Also in response to APEG, the State Department of Education, under the direction of the State Board of Education, began investigating programs and visited Denver, Colorado; Oregon; Pennsylvania; and Texas to discuss their requirements. Recommendations for a new policy for high school graduation requirements were submitted to the State Board of Education. As a result of those recommendations, State Board of Education Policy 30-700 was adopted in November 1976. The policy proposed new criteria for high school graduation and established a process for field-testing proposed changes.

Funding for the field test was supplied by means of a competitive grant program for which all Georgia school systems were eligible to apply. Grants from State funds were awarded to one pilot school system in each of the ten federal districts in Georgia. Each of the ten selected school systems received $25,000 per year beginning in fiscal year 1978 and continuing through fiscal year 1980. The ten pilot school systems were responsible for investigating procedures for establishing the new criteria for high school graduation proposed by the State Board of Education. Among the proposed requirements were:

(1) increased attendance;

(2) increased Carnegie unit requirements in additional subjects;

(3) demonstrated competency in basic skills;

(4) demonstrated proficiency in the coping skills necessary for adult life roles.

During the field test, the ten pilot school systems were to:

(1) enlist the cooperation of the local community in identifying those competencies necessary for the adult life roles of individual, citizen, consumer, producer, and life long learner;

(2) identify methods of measuring competency through grades 9-12 and of certifying competency for high school graduation;

(3) develop programs to ensure that all Georgia high school students, including handicapped students, were taught the graduation competencies;

(4) field-test and evaluate the graduation requirement of 21 Carnegie units in conjunction with a "core curriculum" for all students;

(5) develop programs that would help students make the transition from school to life work;

(6) assist in the dissemination and diffusion of a competency-based educational program throughout the Georgia school system.

In a related project, the 96 test forms developed as part of the Atlanta Assessment Project were administered in 1976 by means of a stratified random sampling procedure, to selected twelfth-grade students throughout the State. This project, known as the Georgia Assessment of Goals in Education (GAGE), provided the State Department of Education with benchmark information for identifying expected levels of performance in 14 life-role skills for students nearing graduation: communication skills, self-understanding, career development, life long learning, leisure, citizenship, family life, health, environment, personal finances, problem solving, social sciences, mathematics, and science and technology.

In 1978 the State Board of Education established several policies which helped to clarify State and local school system responsibilities for improving and assessing instructional programs. State Board of Education Policy 30-3100 set up guidelines for use by the local school systems in Georgia in developing comprehensive plans, which are to include a list of educational goals, a list of instructional objectives, a description of the procedures to be used in assessment, and an overview of planned improvements.

The Georgia State Board of Education also adopted Policy 05-800, which is a policy of educational accountability for Department of Education staff, staff of the local schools, students, and local boards of education. The policy stipulates that the State Superintendent of Schools is to recommend standards in each area of accountability as a basis for evaluation.

Also in 1978, as an amendment to Policy 30-700, the State Board of Education established a timeline for implementation of new graduation requirements for all schools in Georgia. In addition, the Board adopted a preliminary list of 20 competency Performance Standards as a basis for high school graduation.

Phase of implementation. Statewide testing has been mandatory since 1971 in Georgia. From 1971-75 norm-referenced tests in reading, language, and mathematics were administered in grades 4, 8, and 11. Since 1976 the norm-referenced tests have been administered to a sample population of fourth-, eighth-, and eleventh-graders. Criterion-referenced tests in reading, mathematics, and career awareness were field-tested in 1975 and have been administered annually to all students in grades 4 and 8 since 1976. In 1978 criterion-referenced tests in communication skills and mathematics for grade 10 were added to the statewide testing program.

The tests for grades 4 and 8 are currently being revised. The tests in communication skills and mathematics for grade 10 will be administered for the last time in 1980. Beginning in 1981 a criterion-referenced test of basic skills based on the Competency Performance Standards, which were adopted by the State Board of Education in 1978, will be administered to all tenth-graders.

Ten pilot school systems have been engaged in planning activities for the implementation of new high school graduation requirements since 1977. The pilot program is scheduled for completion in 1980. In its 1978 amendment to Policy 30-700, the State Board of Education set up a timetable for the implementation of high school graduation requirements by local school systems throughout the State:

Phase I - Graduation Requirements of 3000 Clock Hours and 20 Carnegie Units will apply for all students enrolling in the ninth grade beginning in the 1980-81 school term.

Phase II - Graduation Requirements of demonstrated performance for the adult life role of a Learner through Competency Performance Standards will be measured statewide and will apply to all students enrolling in the ninth grade beginning in the 1981-82 school term.

Phase III - Graduation Requirements of demonstrated performance for the adult life roles of Individuals, Citizens, Consumers, and Producers through ten Competency Performance Standards will be measured by the local school system through Performance Indicators and will apply for all students enrolling in the ninth grade beginning in the 1982-83 school term.

Goals and Purposes

Statewide testing. The statewide testing program provides information for identifying student needs, for curriculum modification, and for program evaluation. More specifically, according to the State Board of Education Student Assessment Policy, the purposes of the statewide assessment are as follows:

(1) to provide information for helping the student to assess his own progress through the educational system;

(2) to help teachers understand the capabilities and achievements of their students in order to prescribe effective instructional programs;

(3) to identify students with special needs;

(4) to help local systems assess and strengthen principal phases of educational programs;

(5) to help parents understand their children and help them plan ahead realistically;

(6) to provide the State Department of Education with basic information needed for equalizing educational opportunities for all children in the State's school systems;

(7) to provide research agencies at State and local levels with data for generating and testing hypotheses concerning all aspects of education;

(8) to provide every school system with incentives to experiment with important aspects of educational process and organization;

(9) to provide the State Legislature and the public with information concerning the status of the State system of education as a whole and of individual schools within the system;

(10) to assist school systems to use generally recommended practices in test administration and utilization of test results.

The results of statewide testing are also used to determine the allocation of State funds to the local school systems for their remedial programs. Approximately $13,000,000 are allocated for students who pass nine or fewer objectives on the fourth-grade test.

Competency-based education. The competency-based education program emphasizes the learning of essential life-role skills in grades K-12. New high school graduation requirements have been stipulated to assure that a high school diploma does indeed certify capability to function effectively in contemporary society.

Competencies

The focus of Georgia minimum competency testing is on functional life-role skills. The Atlanta Assessment Project, funded by Title III, began the process of developing specific competencies in the 14 major content areas which had been established in 1970 by the State Board of Education in Goals for Education in Georgia. Those content areas are: (1) communication skills, (2) self-understanding, (3) career development, (4) life long learning, (5) leisure, (6) citizenship, (7) family life, (8) health, (9) environment, (10) personal finances, (11) problem solving, (12) social sciences, (13) mathematics, and (14) science and technology. Measurable performance objectives for 17-year-olds were developed for each of the 14 areas during the Atlanta Assessment Project.

In 1973 the Educational Testing Service assisted the State Department of Education in developing objectives for fourth- and eighth-graders to measure progress toward the objectives for 17-year-olds which the assessment had developed. The number of content areas was limited to three: reading, mathematics, and career development. Extensive objectives lists, based on Georgia curriculum guides and objectives developed in the Atlanta Assessment project, were developed by ETS and organized into a survey instrument to determine the importance of each objective for students in Georgia. The survey instrument was distributed to educators at various levels throughout the State and the responses of approximately 18,000 educators were analyzed and summarized. Survey results were reviewed by a committee of teachers in communication arts, mathematics, and career development, by administrators, university personnel, and State Department of Education staff. The committee made a selection of objectives for fourth- and eighth-grade tests from the 20 objectives which received the highest rankings in each of the three content areas. The 20 objectives in each area for each grade level were restated and used as the basis for the development of the criterion-referenced tests in reading, mathematics, and career development for the statewide assessment. The reading objectives were organized into the categories of Vocabulary Skills, Word Recognition Skills, Comprehension/Language Usage, Classification Skills, and Study Skills. Mathematics objectives were categorized as Sets, Numbers and Numerations; Operations, Properties and Number Series; Relations and Fractions; Geometry; Measurement; and Probability and Statistics. Finally, career development objectives were organized into the categories of Self-Awareness, Work and Occupations, Education, and Decision Making.

The State Board of Education reviewed the overall assessment program and approved the objectives above for purposes of test development.

A statewide review took place in 1976 when the Atlanta Assessment Project objectives and items were reviewed by committees of lay people and educators to determine their relevance and importance to a statewide student population. At a later date, committees of Georgia educators were assembled, and, using the results of the statewide review, they selected objectives from the areas of communication skills and mathematics to be included in the statewide criterion-referenced test for the tenth grade. The committees selected 23 objectives in communication skills, and 24 in mathematics.

The development of the Competency Performance Standards for high school graduation began in 1976 with the adoption of State Board of Education Policy 30-700. The policy stated that "the State Board of Education defines as a major role of the public schools the responsibility to ready the children and youth of Georgia for contemporary life roles." Five sets of contemporary life role skills were defined in the policy as follows:

a. Learner--Each citizen should have proficiency in reading, writing, listening, analyzing, and speaking. He should also have basic computing skills. He should be able to acquire knowledge and understanding on his own during and after his formal education.

b. Individual--Each citizen should have the skills and understanding necessary to improve both his physical and mental health. He should be able to use his leisure time in a manner which is profitable and fulfilling to him. He should be able to establish a personal family role which is mutually beneficial to him and to members of his family.

c. Citizen--Each citizen should have the skills and understanding to become a responsible member of society, both using and contributing to society in an appropriate manner and interacting with the environment in a responsible way.

d. Consumer--Each citizen should have the skills and knowledge to be an informed consumer in order to use available resources in an efficient and beneficial manner.

e. Producer--Each citizen should have the skills and knowledge necessary to select and pursue a career which reflects his or her interests and abilities. He or she should also have the skills needed to pursue a new career should a situation arise which dictates a change.

Ten pilot school systems which were chosen to field-test the graduation requirements proposed in State Board Policy 30-700 were charged with the responsibility of identifying the functional competencies necessary for success in those contemporary adult life roles. The pilot school systems used various survey techniques to solicit information from the pilot communities about high school graduation requirements. Competency statements such as, "The student can write legibly," or "The student can identify and apply job-seeking skills," were included on the questionnaires. Respondents indicated whether or not they considered the competency statement to be an essential requirement for high school graduation.

Each pilot community developed its own procedures for distribution and collection of the surveys. Local print and broadcast media were used to inform citizens about the intent of the program and to draw community members into the process of developing the competencies. Questionnaires were distributed to a wide variety of local citizens, including, among *others, students, parents, educators, public service groups, government* officials, and members of business, industry, labor, and civic organizations.

The data and opinions collected in the survey were used by each of the pilot systems to develop a final list of competencies for each of the five skill areas. A statewide validation process will be carried out in the 1979-80 school year.

Results of the local surveys were sent to the State Department of Education where they were distilled into a composite list of 20 competencies. A preliminary list of 20 competencies was adopted as part of the requirements for graduation by the State Board of Education in 1978 in an amendment to Policy 30-700. The 20 Competency Performance Standards are listed in Table 1.

The Competency Performance Standards for the adult life role of the learner will be measured statewide beginning in 1981, when a criterion-referenced test based upon those competencies is administered to all tenth-grade students. Performance standards for the adult life roles of the individual, citizen, consumer, and producer will be measured by the local educational agencies through performance indicators developed at the local level and certified by the local board of education and the local superintendent. A plan of action for implementing the Competency Performance Standards for the adult life roles of individual, citizen, consumer, and producer must be developed by each local educational agency by January 1982.

TABLE 1

PRELIMINARY LIST OF COMPETENCY PERFORMANCE STANDARDS REQUIRED FOR GRADUATION

A. Learner

1. The student reads and interprets communication on a functional level.
2. The student comprehends information received and applies that information in a variety of everyday situations.
3. The student writes legible, appropriate personal and career communications on a functional level.
4. The student receives and transmits oral and visual communication on a functional level.
5. The student employs estimation, approximation, and calculation skills in everyday living situations.
6. The student understands and uses various forms of scales and measurements, graphs, charts, tables, symbols, and other graphic representations.
7. The student applies basic arithmetic operations (adding, subtracting, multiplying, and dividing) in an everyday context.
8. The student recognizes basic geometric shapes and positions necessary for daily mathematical functions.
9. The student uses a variety of information resources to obtain assistance and information.
10. The student employs logical, intuitive, and creative thinking processes.

TABLE 1 (continued)

B. Individual

1. The student knows appropriate emergency responses to accidents and demonstrates preventive actions for health and safety hazards.
2. The student recognizes and practices sound personal health habits necessary to maintain physical and mental well-being.
3. The student understands the sound health care principles involved in family living, parenting, and parenthood.

C. Citizen

1. The student understands the basic structure and functions of the American system of Government and the American economic system.
2. The student knows basic legal rights and responsibilities of the citizen under the American judicial and penal systems.
3. The student recognizes relationships between current societal and environmental problems and the individual's role and responsibilities.

D. Consumer

1. The student knows the principles of sound personal financial planning and management.
2. The student identifies the legal rights and responsibilities of the consumer in buying and selling goods and services.

TABLE 1 (continued)

E. Producer

1. The student analyzes personal career opportunities and choices in career planning and management.
2. The student demonstrates the skills necessary to obtain employment.

The ten pilot school systems have developed lists of performance indicators which are descriptions of the performance standards. These performance indicators will be reviewed in the statewide validation process.

The pilot school systems will also review and recommend to the State Department of Education specific performance measurement techniques, instruments, and procedures for assessing whether or not students have met the Competency Performance Standards.

Standards and Standard Setting

Standards for the criterion-referenced tests for grades 4 and 8 were set in 1975 after test items had been field-tested. The standards were set for the purpose of providing teachers an expected level of student performance.

Standards for the minimum level of achievement were set by a committee of educators with technical assistance from the State Department of Education staff and the staff of the Educational Testing Service. There were approximately 12-15 committee members for each subject area. Using data from field-testing, the committees were able to set two components for each standard: the total number of items needed to measure each objective and the number of those items which were to be answered correctly by the student as a measure of objective achievement. Although the number of items varied for both components, a typical combination required six items to measure an objective, out of which four items had to be answered correctly by the student to demonstrate achievement of that objective. Broader objectives require more test items than narrowly defined objectives; the required number of correct answers varies with the difficulty of the objective.

The standards set for each objective refer to particular objectives rather than to the overall test score.

For the statewide test, which is soon to be developed to test the Learner Competency Performance Standards for high school graduation, the Board has not yet determined if there will be a statewide standard of performance as an exit requirement.

Each local school system will be responsible for setting standards for the ten Competency Performance Standards which will be assessed at the local level, i.e., those in the life role skill areas of individual, citizen, consumer, and producer.

Target Groups and Testing Schedule

Currently, tests are administered to every student in grades 4, 8, and 10. Students are tested in reading, mathematics, and career development in grades 4 and 8; there are approximately 80,000 students in each grade. In grade 10, students are tested in communication skills and mathematics. In grade 10, approximately 75,000 students are tested. The criterion-referenced tests are administered in the spring.

Norm-referenced tests are administered annually to a sample of students in grades 4, 8, and 11 for the purpose of maintaining a longitudinal data base comparing Georgia students to a national population sample. Norm-referenced testing takes place in the fall.

Except for those officially classified as special education students, all Georgia students in grades 4, 8, and 10 who are enrolled in public schools are to take the statewide tests.

Test Instruments

Criterion-referenced tests for grades 4, 8, and 10 were developed specifically for use in Georgia and are required for use by all local school systems. The tests for grades 4 and 8 were developed separate from the tests for grade 10 and by a different procedure.

The development of test items for the objectives for grades 4 and 8 involved three steps. For the first two steps of the process, committees of about ten members were made up for each subject at each grade level. All committee members were content specialists drawn predominately from the local school systems and also from higher education. Test items drafted by ETS were subject to review by additional committees of Georgia educators to ensure that the drafted items were appropriately formulated for the specified objective. In the final step, a third committee, balanced for race and sex, reviewed all the screened test items in each subject area to eliminate possible bias. The Educational Testing Service assisted the committees in item review and produced test forms for field tryouts.

Test items for grades 4 and 8 were given field tryouts in the fall of 1975. For each test item, 200-300 responses were collected and analyzed. Following the analysis of field-test data, the committees that had assisted in item-review sessions were reconvened to select the test items for use in the final test forms.

For grades 4 and 8, 20 objectives were designated in each of the three content areas: reading, mathematics, and career development. The reading and mathematics tests are divided into three sections; each test contains 120 multiple-choice test items with four response choices. The career development test is divided into two forms, each of which contains 60 items testing 10 objectives. Each form has two sections with 30 test items each.

The reading and mathematics test items are each presented in a single test booklet. The two forms of the career development test are in separate booklets. Each test is preceded by a practice test. Answers are recorded on a separate machine-scorable answer sheet.

Each section of each test is designed to be administered in about 45 minutes, although test administrators are instructed to allow all children ample time to finish the test.

Items for the tenth-grade tests in communication skills and mathematics were drawn directly from the pool of test items which had been developed for the Atlanta Assessment Project and used in the Georgia Assessment of Goals in Education (GAGE). The items used are those which correspond to the 23 objectives in communication skills and the 24 objectives in mathematics which had been selected for the tests (see Competencies). The communication skills test consists of 115 test items; the math test, 120.

All test items are multiple-choice questions with four possible response choices. Responses are recorded on a machine-scorable answer sheet.

Test Administration

A test coordinator is appointed for each school system by the local superintendent and for each school building by the building principal. School staff administer the tests.

Local school system coordinators are responsible for scheduling the test dates and the makeup period which must fall within a period of about three weeks which is designated by the State Department of Education.

Instructions to local staffs for administering the tests and to coordinators for preparation and handling of test materials are contained in three manuals prepared by the testing contractor and the State Department of Education staff.

The system coordinator is responsible for receiving all test materials from the outside contractor and distributing them to schools. The system coordinator also conducts workshops for building coordinators and administrators, and following testing, receives the materials from the schools, and prepares and ships the answer sheets to the scoring contractor.

Test booklets are stored by the local education agency from year to year and are reused. The test coordinator has responsiblity for test security.

The tests are required by the State; no parental permission is necessary.

Scoring and Analysis

There are five different types of results reports which are produced for the Statewide Assessment Program. Each report contains a summary of test information at an appropriate level of specificity for the intended user of that report. These results are produced and delivered by the assessment contractor within 30 days of test administration.

A report is provided for each student in each competency area. For each test competency, or objective, the text of the objective is provided along with the student's performance for every test item matched to that objective. Correct item responses are indicated by an asterisk (*), while incorrect answers are represented by the letter identifying the incorrect response alternative chosen by the student. For each objective, a narrative statement indicates whether or not the student has met the standard set for achievement of that objective.

Students are said to have "achieved" an objective if they have answered a specified number of test questions correctly. These achievement standards are set by committees of Georgia teachers and educators. (See Standards and Standard Setting.)

Using the student's first name, the narrative specifies areas in which the student may need additional help. A report is also provided to parents. Finally, a summary statement provides the total number of objectives achieved by the student, the number of items answered correctly, and recommendations for remedial activities.

In addition to receiving copies of the student reports, teachers receive Student Achievement Rosters which summarize results for all students in a school. These reports indicate whether or not each student achieved each objective and the total number of objectives achieved by each student. Names of students who did not achieve an objective are listed for each objective. In addition, the total number of students in the school who have achieved each objective is provided.

A Summary Report is provided for each school in each competency area. This report shows, in graphic form, the percentage of students in the school who have achieved each objective. Also shown, for comparison purposes, are the corresponding percentages of students achieving the objectives in the school system, the Educational Planning District (EPD), and the State. A similar report is provided at the school-system level.

Two other school achievement summary reports are provided at the system level. The first is a distribution of the total number of objectives achieved by students in each school, the system, the EPD, and the State. This report provides, for example, the percentage of students achieving exactly 15 of the 20 reading objectives for grade 4, or alternatively, at least 15 of those 20 objectives. The second school achievement summary report shows the percentage of students achieving each of the objectives in each school, the system, the EPD, and the State.

Reporting/Dissemination

The State Department of Education provides a number of different materials which serve to aid the user in interpreting the computer results reports described above. In addition, narrative reports are produced to disseminate general information regarding the program itself.

Teachers in each grade level are supplied with a Teacher's Interpretive Guide for Student Report which explains the composition of and scoring methods for each test and helps in the interpretation of the computer output. An Interpretive Guide for Summary Reports is distributed to each school building and each school system to help school and system-level administrators understand and interpret the computer reports which contain summary information on those levels. These guides contain samples of each type of computer output, along with descriptive keys for their use.

A general descriptive brochure which is widely disseminated is entitled Criterion-Referenced Tests in Georgia Schools: Some Questions and Answers. This document concisely describes the tests and the testing program. It includes lists of the competencies for the different grade levels and competency areas, and provides examples of typical test items. It also describes the ways in which the testing program will be used to help improve education in Georgia.

Test results for individual students are provided for inclusion in each student's permanent file. In addition, the State Board has directed that schools report on each student's progress to the parents of that student.

A number of technical manuals and reports are also produced each year. These reports describe the statistical and psychometric properties of the tests, and provide such information as the test score distributions for all Georgia students, test readability, and individual item analyses. State Board of Education policy specifies that the results of the testing program should be reported to the State Board annually in order to provide an overall picture of statewide student achievement.

Use and Implications of Test Results

Consequences to students. Results of the statewide tests are used to help students assess their own progress and to help teachers prescribe instructional programs for them. Test results are also used to identify students with special needs. Results of statewide testing are included in students' cumulative folders.

After the new graduation requirements have been fully implemented, students will have to meet the required performance standards and will have to meet required course-hour and attendance standards in order to receive the high school diploma. The State Board has determined that the Learner competencies will be measured statewide but a final determination has not been made as to whether there will be statewide exit criteria.

The competency-based education program also stipulates that students diagnosed as marginal learners, starting in the fall of the ninth grade, must have diagnostic reexaminations during each school year in grades 9-12.

Consequences to programs. The State Board's Student Assessment Policy states that the results of the statewide testing program shall be used for improvement of instructional programs at the local school level. Specifically, the State Board directs that test results be used to:

(1) identify individual weakness in skill development in vocabulary, reading, language, work study, and mathematics;

(2) diagnose strengths and weaknesses of groups;

(3) individualize instructon;

(4) report progress to parents;

(5) select curriculum materials;

(6) set the pace of instruction;

(7) select methods of instruction;

(8) counsel students;

(9) help determine changes needed in the curriculum of the previous grades for basic skill development.

(SBE, n.d., p. 2)

State funds for remedial programs are allocated partially on the basis of the statewide test scores. A school system receives an amount based on the number of students who achieve nine or fewer objectives on the fourth-grade test.

Implementation of the new high school graduation requirements will have additional consequences for local programs. State Board of Education Policy 30-700 states that local systems must establish:

1. performance indicators to determine if performance objectives have been met;
2. planned course descriptions for all courses offered;
3. appropriate performance objectives and assessment procedures for students who have been indentified as having handicaps which prevent them from meeting the adopted Contemporary Life Role performance objectives;
4. necessary recordkeeping and reporting to students and parents on the attainment of performance objectives. These local performance objectives should be tested at the lowest grade feasible but no later than ninth grade (SBE 30-700, 1978).

Local school systems must modify their course offerings to meet the State's requirements. Beginning with kindergarten and continuing through twelfth grade, schools will be responsible for preparing students to meet the life-role competency standards set by the State. In addition, all high schools must make any necessary changes to ensure that students can meet the clock hours and Carnegie units required by the State.

Local school systems are also required to provide every ninth-grade student a guidance session for the purpose of considering the effect of career objectives on high school course selections. Annually thereafter, each student must be counseled about alternative means for satisfying unmet performance objectives.

Provisions for Special Populations

Present regulations of the State Board of Education's Student Assessment Policy include the following provision:

> Each local system shall test with the designated Georgia Criterion-referenced Tests all students in grades kindergarten, four, eight, and ten, or any other grades which the State Board shall designate, except that those students classified as Educable Mentally Retarded (EMR), Trainable Mentally Retarded (TMR), Specific Learning Disabilities (SLD), Visually Impaired, Hearing Impaired, or Multi-handicapped may be excluded. The students do not have to be enrolled currently in one of these classes in order to be exempt if the system's placement committee has made the classification decision. Exemption of Behavior Disorder (BD) students or students whose primary language is not English may be allowed at the discretion of the local system if it is determined that testing such students in a standardized manner is not feasible. However, every effort should be made to test these students if at all possible. The classification of the students exempted shall be in accordance with policies and procedures insuring due process and any applicable guidelines as outlined in Georgia's Special Education Regulations and Procedures and the Annual Program Plan (SBE, n.d., p. 2).

The State Board has made no specific provisions for special populations in its High School Graduation Requirements Policy. Each local system will be required to set up its own provisions. One of the ten pilot systems is currently developing procedures for bilingual students.

Program Resources and Costs

General program staffing. The Statewide Assessment Program staff consists of three full-time professionals, one half-time professional, and two secretaries. The staff coordinates State policy and the activities of outside contractors who develop, administer, and score the tests. The staff also responds to questions and needs of local education agencies. Each professional provides a number of workshops and/or on-site support activities each year.

For the competency-based education program, the State Department of Education has a staff of two full-time professionals; one half-time professional, and secretarial support to coordinate the activities of the pilot systems. Staff members also consult with content specialists and testing specialists as necessary. A liaison person in each pilot district has coordinated the entire developmental effort of the CBE project.

Approximate costs. Start-up costs for the assessment program are no longer identifiable because the program has evolved over a number of years. Costs are currently $300,000 for printing, distributing, collecting, and processing answer sheets for the fourth-, eighth-, and tenth-grades, and for printing computer reports for students, school systems, regional planning units, and the State Department of Education. The costs for test booklets, test development, and additional remedial activities are not included in this sum.

For the competency-based education program, each pilot district has been supplied with $25,000 from State funds to plan and experiment with the development of competencies and measurement strategies. There has been no decision regarding the allocation of funds to other districts in the State.

Funding sources. All of the funds to support both the ongoing assessment program and the competency-based education program are appropriated each year by the State. Initial test development for the assessment program received some funding from Title III through local school districts to the Atlanta Public Schools. Additional assessment activities such as optional testing are paid for by the local school districts.

Program Evaluation

Georgia's statewide testing program has been evaluated informally through feedback from Georgia educators and formally by a program audit from the Georgia State Office of Audit. In addition, formal mechanisms are being established for overall program evaluation.

Future Directions

In 1980 a statewide test for all kindergarten children will be administered for the first time. The test will assess readiness skills in the areas of language and number concept development. A required test for all first-grade children is also being considered for possible development in fiscal year 1980.

In 1981 a tenth-grade basic skills test based on Competency Performance Standards associated with the life role of the learner will replace the criterion-referenced tests which are currently in use. By the following year, local school systems must have their own plans for assessing the ten Competency Performance Standards associated with the life roles of individual, consumer, citizen, and producer.

The new high school graduation requirements will apply in full to students who enroll in the ninth grade beginning in the 1982-83 school year. The State Department of Education will be responsible for disseminating information and materials developed by the ten pilot school systems to the other school systems in the State. Those materials are expected to assist local systems in implementing the new high school graduation requirements. Comprehensive planning for competency-based education will be extended to the elementary and junior high school levels in the future.

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THOMAS COUNTY, GEORGIA

In 1976, the State of Georgia initiated a program of statewide educational improvement and high school graduation requirements. The title of the program in Thomas County is Project 21/Competency-Based Education (CBE). It included a comprehensive planning process for local school systems, a policy of educational accountability, and a specific statement of requirements for high school graduation upon which 20 competency performance standards are based (see Minimum Competency Testing in the State of Georgia, NES, 1979). Thomas County was one of nine pilot districts chosen and funded to implement this project.

Thomas County's Project 21/CBE program includes provisions for curriculum revision, additional areas of study, development of guidelines for awarding diplomas, development of remediation procedures, and minimum competency testing. The testing component is designed to assess 34 life-role competencies divided into the following categories: Learner, Individual, Citizen, Consumer, and Producer. Testing is currently done in grades 8 and 9, but is slated to expand to encompass grades K-12.

Legislative and Policy History

Policy history. In the spring of 1977, Thomas County, Georgia was selected as one of nine school districts in the state to pilot Project 21/CBE. The implementation of this five-year project, funded by the State Board of Education, was an action taken in response to Georgia State Board of Education Policy No. 30-700 (November 1976). Intended to increase student, teacher, and district accountability, the policy called for a systematic study of secondary school reform on a pilot basis, which included new high school requirements by defining the following: (1) learning and guidance alternatives for secondary students, (2) ways of defining expectations for schools and high school graduates, and (3) ways to determine to what extent high schools are preparing young people to function as citizens, individuals, learners, consumers, and producers (Cooley, 1978, p. 2).

Phase of implementation. Planning for the first year of the pilot project (1979) focused on tasks such as identifying and adopting life-role competencies to be required locally for high school graduation; initiating secondary curriculum revisions to ensure a competency-based curriculum which incorporates core life-role competencies; implementing an Individual Student Advisory System (ISAS); assessing the present status of Thomas County's high school students on an established set of life-role competencies; and organizing and initiating additional tasks essential to the success of Project 21/CBE. While competencies were first identified and instituted in the high school curricula, the intent of Project 21/CBE is to incorporate competencies into all grades, K-12--a goal which could take six to eight years to be completely realized. The middle schools were introduced to general competencies in 1978-79 in communicative arts and mathematics only. The elementary and middle schools will incorporate competencies into their curricula for these two areas in the 1979-80 school year.

The new areas emphasizing life-role skills were incorporated into school programs in 1978-79. Project plans for 1979-80 include the review and revision of local efforts. Although project status reports are constantly disseminated, a formal dissemination plan will commence in 1980-81 and an evaluation of those efforts will follow in 1981-82.

Goals and Purposes

General goals. The intent of Project 21/CBE is to systematically study and implement secondary school reform, and in so doing to develop an educational program which can deliver a more meaningful high school diploma. The scope of the project is to include all grades, K-12, at some future date. Areas in need of change which have been specifically addressed include the following: student advisory systems, student attitudes and self-concepts, reading programs at the middle and secondary school level, and scheduling strategies, and the overall middle school program. Workshops for school and administrative staff begun in the summer of 1979 provided a vehicle for identifying and investigating these areas.

According to the policy recently implemented, students will receive a diploma if they have completed three requirements: (1) attendance of 3,150 hours, (2) successful completion of courses, and (3) attainment of performance standards. The requirement for measurement of performance standards has been waived until such time as all Georgia schools implement competency-based curricula, scheduled for September 1980. There are several options open to the student who is deficient in one or more of these areas. First, the student may participate in the graduation ceremony and receive an attendance certificate instead of a diploma. Second, the student may attend summer school. A student may also enroll the following school year. Finally, the student may choose to return at some later time to satisfy deficiencies in requirements (Competency-Based Education, Project 21/CBE, "Highlights of Major Developments").

Specific purposes. In its Progress Report for FY 1978 and Work Plan for FY 1979, Thomas County lists the following specific purposes for the second pilot year (1978-79):

(1) to ensure Project 21 compliance and consistency with Thomas County Board of Education policies;

(2) to incorporate Thomas County's 34 life-role competencies into the secondary curriculum structure and into meaningful learning experiences for students;

(3) to revise Thomas County's secondary curriculum into a competency-based curriculum and to incorporate into it the minimum/core competencies and additional areas of study;

(4) to begin periodic review of Thomas County's guidance, counseling, and advisement program in order to improve services and to ensure adequate academic and career counseling;

(5) to ensure a secondary assessment program that meets the information needs of competency-based education and is compatible with other Thomas County School District assessment components;

(6) to implement a management/record keeping/reporting system which satisfies requirements of Project 21/Competency-Based Education;

(7) to develop recommendations for a local board policy regarding provisions for special education (handicapped) children and to begin program development and appropriate implementation;

(8) to develop recommendations of local board policy regarding alternative credit and attendance options and off-campus experiences, and to begin implementation of appropriate changes;

(9) to develop recommendations for local board policy regarding the awarding of diplomas and certificates and to begin designing appropriate changes in accordance with the policy;

(10) to continue coordinating Project 21/CBE efforts with Thomas County's comprehensive management and planning activities;

(11) to ensure the involvement of appropriate individuals and groups (staff, students, parents, community, etc.) at appropriate points in the development, implementation, and review of Project 21 and its various aspects;

(12) to develop and implement a communications system which ensures that the appropriate information is reported to the appropriate individuals or groups (board, staff, students, parents, community) on a systematic basis;

(13) to evaluate Project 21 design, development, and implementation and to utilize results to improve Thomas County's CBE efforts;

(14) to participate in appropriate district, area, and state dissemination activities in order to share Thomas County's Project 21 experiences and to provide assistance to others in their CBE efforts;

(15) to ensure that Thomas County's core/minimum competencies, assessment procedures, curriculum materials, and other Project 21 products and materials are free of racial and sexual bias (Cooley & Hall, 1978, pp. 60-61).

Thomas County administrators hope to develop a performance profile to accompany the diploma or certificate awarded to every student upon leaving high school. Information listed will include: courses taken (excluding grades), competencies required and met for specific programs and levels of excellence reached, and extracurricular activities. It is hoped that the profile will better depict student performance in a positive manner to parents, advisors, employers, and educational institutions.

Originally, an early diagnostic instrument (pre-high school) was desired to allow for a solid remediation program. However, according to the program director, consideration is being given to administering a high school exit examination to emphasize and encourage the continual need for improved CBE curricula throughout the years. It is also expected that the actions of the State legislature will greatly affect the purposes of testing in regard to the desirability of an exit test as opposed to a diagnostic instrument.

At the State level, it is expected that teachers, schools, and pupils will become more accountable as a result of the competency-based program. One example of such accountability has been the rewriting of all curriculum guides.

Thus far, the program has studied a broader spectrum than individual student outcomes. Information derived from the latter will be of interest at a later time as plans for remediation and further diagnosis are implemented.

Competencies

Thirty-four contemporary, life-role competencies have been incorporated by Thomas County into the secondary curriculum structure of programs and courses. These 34 competencies were compiled from information taken from various surveys. Between 75 and 80 people representing teachers, administrators, students, parents, community groups, and business people collected and analyzed survey information regarding essential competencies for high school graduation. This group reviewed all items on four commercial testing instruments from which many lists of competencies were written. Eight hundred people were randomly selected to identify the competencies they felt were most important and necessary for high school graduation. More input data was obtained through an open-ended survey administered to high school students and teachers which asked the following: "If you were to go through high school again, what five areas would you feel were necessary to prepare you for the years following graduation?"

From all these information sources, the top 34 competencies were selected and categorized into the following areas: the Learner, the Individual, the Consumer, the Citizen, and the Producer. The Thomas County Board of Education adopted the 34 minimum/core competencies for high school graduation on July 11, 1978. The State of Georgia required competencies as State requirements for high school graduation in December 1978. These were based in part on the 34 minimum competencies which are listed in Table 1.

A continual effort is made to maintain public awareness of the life-role competencies and their role in the educational program. On an ongoing basis, the competencies are being revised as necessary to reflect current test results and findings. The increased awareness of parents, teachers, and community members throughout the development and implementation phases of Project 21 is thought to be leading to the accomplishment of local educational goals.

In order to assess the status of Thomas County students on an existing set of life-role competencies, an instrument was selected for application to a randomly selected student population. Baseline data was accumulated through the administration of the Adult Performance Level (APL) Survey to 400 students (100 per grade) in grades 9-12, and the administration of Content Area Measures (CAM) in five areas (community resources, health, occupational knowledge, consumer economics, government and law) to approximately 600 students in grades 9-11. Results of these two instruments were analyzed and related to Thomas County's needs.

TABLE 1

Life-Role Competencies Required for Graduation in Thomas County, Georgia

Learner

1. The student can read and interpret.
2. The student can use a dictionary to check spellings, definitions, and pronunciations of words.
3. The student can read and write numbers.
4. The student can use media center resources.
5. The student can read, interpret and write business, personal, and social letters.
6. The student can orally summarize the contents of a speech or discussion.
7. The student can perform the four basic mathematical operations.
8. The student can distinguish between fact and opinion.
9. The student can recognize that learning is a lifelong process.

Individual

10. The student can recognize the basic principles that constitute good physical health.
11. The student can recognize the principles that constitute good mental health.
12. The student can recognize the methods of maintaining personal hygiene.
13. The student can give first aid.
14. The student can identify safety measures.
15. The student can demonstrate an activity that may be used in leisure time.
16. The student can use a telephone and telephone directory.

TABLE 1 (continued)

Citizen

17. The student can recognize a citizen's basic legal rights and recognize the freedom to make choices pertaining to these rights.
18. The student can recognize the functions of government and certain government officials.
19. The student can contact government officials.
20. The student can recognize the services of public agencies.
21. The student can read and interpret public signs and signals.
22. The student can assess the effects of growth or decline of population.

Consumer

23. The student can plan a budget.
24. The student can count money and make correct change.
25. The student can shop comparatively.
26. The student can recognize options for protection from faulty goods and services.
27. The student can apply for and compare the types of credit.
28. The student can recognize the types of loans.
29. The student can plan for long-range financial protection.

Producer

30. The student can acquire information concerning primary and secondary career choices related to personal interests and abilities.
31. The student can prepare a resume.
32. The student can fill out a job application correctly.
33. The student can complete the requirements for a job interview.
34. The student can fill out government forms.

Standards and Standard Setting

Neither a cutoff score for each competency nor an overall passing score on the assessment instrument have been set to date. According to the program director, the test will not be too difficult and the cutoff score not set too high, so that program acceptance will not be affected by large numbers of failing students. Test difficulty can be increased as program support becomes more stable.

Target Groups and Testing Schedule

First-year Project 21 activities in Thomas County have concentrated on students in grades 9-12, since the immediate focus and intent of the pilot project is secondary education improvement. The Thomas County School District clearly recognizes, however, that the real intent of Project 21 can only be served by integrating competency-based education efforts into the entire K-12 program. The target group is expected to span grades K-12 in two to three years.

To date, no final decisions have been made regarding target groups or testing schedule, with the exception of the 200 item APL.

Test Instruments

No State test as yet has been mandated for the assessment of the minimum competencies in life-role skills as identified by Thomas County. One assessment procedure currently being used is the one-to-one teacher/student check-off procedure. Through various modes of expression (oral, manipulative, simulation, or written), a student can demonstrate life-role skills to the teacher; this method may be eliminated due to its alleged lack of reliability and validity.

The second current experiment in assessment is the use of a written, multiple-choice, APL-related customized test. This test, developed cooperatively by American College Testing (ACT) and a five-district consortium (including Thomas County), includes 10 items per competency. The competencies selected for measurement are the 20 state-adopted competencies, which will ensure the use of this test by at least five districts in the State of Georgia. If the State mandates that passing the test will, in fact, become an exit criterion for high school graduation, it is hoped that revised versions of this same test will be utilized.

Items for the customized APL-200 were selected from the APL bank and parallel the APL-40 test in format, style, and difficulty level. Both these items and those on the CAM tests have field-test data available for them. Those items written by the five-county consortium that are to be included on the test will match performance indicators and will be field-tested during test administration. Items will also be reviewed for bias by the application of two questions to each: (1) Is the item potentially offensive from an individual point of view? and (2) Does the item appear predisposed to one group of people more than another?

For those Learner skills not measured by the APL customized tests, the State has agreed to provide sample tests. Local districts are responsible for the assessment of these skills including handwriting (legibility), listening, and speaking. Other diagnostic instruments will be developed for those students who have failed one or more competency. If passing the APL-200 becomes a high school exit criterion, there will be a shorter test designed to assess mastery after remediation has taken place, of only those skills that were failed. A student who passes all but two or three competencies, for example, will first be given assistance in the weak areas during study hall. The "mini-tests" will then be administered to verify that the deficient skills have been achieved. It is anticipated that the mini-tests will consist of approximately 30 items per competency. All of the items will be multiple-choice with the exception of the handwriting demonstration, which will require the student to fill out forms.

Test Administration

The APL-200 will be administered by teachers, school monitors, and aides. Parental permission is not necessary. A test administration manual, developed by ACT, is distributed to teachers prior to the test administration to familiarize them with test procedures and instructions. The test administration procedures are demonstrated at a planning meeting.

Test security controls include careful monitoring and inventorying of booklets and answer sheets and storing test materials in a secure location.

The APL-200 is an untimed test; the estimated average time needed for the first half of the test is two hours and 15 minutes. With time built in for orientation and instructions, it is expected that the second half of the test will take an average of two hours and 20 minutes to complete.

Scoring and Analysis

ACT has been contracted to machine-score all answer sheets and produce all analyses of test results for Thomas County's Project 21. Analyses by total score and by separate competencies will be compiled for each student, class, school, and district. Turnaround time for delivering test results is expected to be approximately four to six weeks. A district profile, class profile, and student profile could be generated. No requirements for data analysis have been established at this time.

Reporting/Dissemination

The reports of test results will reflect the program's intention to familiarize the local community with the program and gain community acceptance of program implementation. It is therefore projected that reports will be made available to various audiences including high school faculty, the Board of Education, and the Central Office staff. A report of individual students' competencies/skills will be designed for parents.

Although the reporting format has not been completed, it is expected that reports will contain a listing of competencies, whether or not these competencies were met, and the date of this determination. The method of determining a cutoff score has not yet been decided.

All report dissemination will be managed by the Central Office. Student reports (ISAS) will be received via his/her advisor. Reports to parents may be transmitted by the student or by mail. All data contained in the student analysis profile will become a part of the student's permanent record file.

Provisions for Special Populations

In August 1978, the Special Education Committee voted to adopted the 34 core competencies as approved by the Thomas County Board of Education with the stipulation that performance indicators be revised to meet the needs of individual students utilizing the Individual Education Plans (IEPs).

Assessment procedures are being developed to modify the core competencies as required in the special education areas. It is not yet known how requirements for obtaining a diploma will be interpreted for groups with different needs and skills. Areas of special education at which revisions and assessment procedures will be aimed are currently being developed.

Use and Implications of Test Results

Consequences to students. The past emphasis of Project 21 has been to increase student learning via curriculum revision and inclusion of life-role skills in relevant courses at the high school level. The focus has been on program development rather than individual student achievement; there are currently no consequences to students who do not pass the test. However, the State legislature may mandate the use of test results as an exit requirement.

Currently, in order to graduate with a diploma (as opposed to an attendance certificate) a student must fulfill two requirements: (1) attend classes for a total of 3,150 hours, and (2) complete certain state-mandated courses. It is anticipated that satisfactory performance on the measurement of all competencies established by Thomas County's Project 21 will be a requirement for the graduating class of 1984. There are no plans to develop an early exit program through the successful completion of prescribed courses and competency testing; the possibility of course exemption for those students who perform successfully on the competency test is being explored.

Consequences to programs. If one of the steps mentioned above is not completed satisfactorily, there will be remediation programs available. Current efforts to provide remediation instruction at different levels in the high school include the use of Title I in mathematics and English, ESAA reading in high school, revised curricula to reflect the needs of low-level students, and the establishment of one-on-one tutorial programs. Remediation may be determined to be mandatory for the student who is deficient in one or more competencies. A remedial instrument will be expected within each content department. Concurrently, advisors will be given information regarding their students' deficiencies and needs for remedial guidance.

Staff will utilize results to help them identify which competencies may need more or less instructional emphasis, so that they may revise curriculum accordingly.

Program Resources and Costs

General program staffing. The program director, a member of the Central Office staff is presently coordinating all activities of local teachers, other members of the Central Office, the community, and the Georgia State Department of Education concerning implementation of the various phases of Project 21 in Thomas County. The entire faculty of the high school has been actively involved in the planning and design processes. All teachers were given released time for revising and writing curricula and course guides.

Many committees also contribute to major aspects of the project: the 16-member Project 21 Steering Committee consisting of administrators, staff, teachers, and one parent; four Standing Committees on Staff Development, Testing, Nontraditional Courses, and Community Involvement; six Competency Planning Teams; one Special Education Committee; and six Course Study Committees.

Tests will be proctored and administered by teachers and aides within the local schools. Local teachers and advisors will also control remediation processes and follow-ups.

Approximate costs and funding sources. At the State level, $25,000 per year has been appropriated to Thomas County for a period of three years. This amount will be matched by the local district. However, during the first year of program planning the local district did not quite match the state-budgeted $25,000. The local district more than matched State funds during the program's second and third years. It is not known how much money will be committed by the State for the project's fourth and fifth years. The budget breakdown for Thomas County is as follows:

(1) Staff Development:	$ 5,500
(2) Curriculum Development:	$14,000
(3) Project Dissemination:	$ 1,100
(4) Project Diffusion:	$ 800
(5) Special Education Program Development:	$ 1,500
(6) Guidance-Counseling Program Development:	$ 1,500
(7) Pupil Assessment Program Development:	$ 8,000
(8) Recording/Reporting Processes Development:	$ 5,000
(9) Project Evaluation:	$ 1,500
(10) Management Processes:	$15,000
TOTAL:	$53,400

(Cooley & Hall, 1978, p. 125)

Program Evaluation

Thomas County administrators advocate utilizing both formative and summative evaluation procedures in order to ensure the maximum potential for success in the development and implementation of Project 21/CBE. Plans are being made, therefore, to evaluate Thomas County's program, plans which will make use of the following strategies:

(1) Thomas County will participate in state-implemented evaluation procedures;

(2) an internal evaluation keyed to both long-range plans and short-range goals will be conducted that will include a checklist rating of program components and activities;

(3) evaluative input will be solicited from participants of such activities as workshops, curriculum revision, staff development, and product development;

(4) periodic surveys of staff, students, parents, and the community will be conducted in order to collect information about awareness and understanding of the program, its progress, and its implications.

Future Directions

Areas in need of refinement and change will become more apparent as the project becomes more detailed and specific. One change expected in the near future is the elimination of one-on-one teacher certification of student competencies. Time has been set aside during the summer of 1979 to determine alternative methods for certifying competencies.

Determination of local board criteria regarding awarding of the high school diploma and any related certificates and/or profiles is slated for 1979-80.

The program director expects that the State will undertake the development of the first 10 competencies to be measured by state-developed items. It will be the responsibility of local districts to develop the second 10 competencies of the 20 mandated by the State in December 1978. It is hoped that test administration will conform across districts to permit standard, easy-to-interpret results. Following data analyses, the test will be reviewed and revised where necessary.

Student outcome information will be used at the local level to identify weak students and their deficiencies and also to identify weak teachers. The high student/teacher ratio, which Thomas County shares with many other localities, causes a problem that may never be resolved due to cost restraints.

It is hoped that the State will direct its assistance to smaller rather than larger school systems in developing competency programs. Thomas County's pilot program, Project 21, may be called on by the State to assist and consult with other programs as they develop in Georgia.

References

Cooley, W. R., & Hall, S. Project 21/CBE Progress Report for FY 1978 and Work Plan for FY 1979. Thomasville, Georgia, 1978.

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IDAHO

In February 1977, proficiency testing in the public schools on a district optional basis was approved by the Idaho State Board of Education, to begin in the 1978-1979 school year. The action called for a statewide program of proficiency testing in the areas of reading, writing, arithmetic, and spelling. The tests were developed, and are distributed and supervised by the Idaho Department of Education. Districts choosing to participate in the proficiency testing program are expected to use the tests developed and administered by the Department, through which the scoring will be conducted; costs of scoring are borne by the local school district. Any local school district adopting the proficiency testing program is required to test all students in the fall and spring, beginning in grade 9, and to offer, in the fall and spring of each ensuing year, the opportunity for students to retake any portions of the test previously failed. Students who pass all sections of the test receive a special State seal on their diplomas, but no student is denied a diploma for failing to meet proficiency standards. Failing students must be provided appropriate remediation by the school districts, and special education students may, but are not required to, participate in the program.

Legislative and Policy History

In 1976, the Idaho State Board of Education initiated a series of public "speakups" on requirements for graduation, and out of these came the proposal for minimum competency testing. The "speakups" were held because the public had begun to express concerns reflecting nationwide sentiment about the ability of students to demonstrate competency in basic skills. The Board recognized a need to strengthen the high school diploma in order to assure parents, employers, and college admissions officials that students graduating from Idaho's public schools can read, write, spell, and compute at acceptable levels. Further, public response to a questionnaire distributed by the Board indicated a desire on their part for tougher standards and demonstrated student competency in basic skills.

In February 1977, then, the Board mandated a district-option proficiency testing program. The mandate requires testing for qualification to graduate from the twelfth grade, but only to the extent that those students in self-selected participating districts who choose to participate in the program will receive a special State seal on their diplomas. No student will be denied a diploma for failing to pass all parts of the tests. The policy was heavily influenced by a visit by several Board members to Denver's minimum competency program, and the action was taken, in part, to forestall legislative action.

Phase of implementation. For districts who choose to participate in the proficiency testing program by the fall of 1978, the class of 1982 will be the first required to pass the proficiency examinations in order to receive the State seal. Field testing of the state-developed examinations occurred in 1978, and the first official administration of the instruments occurred in the ninth grade in the spring of 1979. Testing in the ninth grade constitutes the first opportunity students have to meet the proficiency requirements; following that, students will be tested at regular intervals through grade 12 on only those sections that were failed at a prior testing opportunity.

Beginning with the 1978-79 school year, 66 of Idaho's 109 school districts have chosen to participate in the proficiency testing program. Approximately 70% of the Idaho school population are therefore involved.

Goals and Purposes

The intent of the statewide program of proficiency testing is to determine student proficiency in basic skills and to diagnose and remediate student weaknesses prior to graduation. Local districts have the option to make graduation from high school contingent upon the student's passing the tests, but they must permit students who fail to graduate with a certificate of attendance.

Competencies

The Board defined four basic skill areas in their 1977 resolution: reading, writing, arithmetic, and spelling. Further definition and delineation of these four competency areas was accomplished by a task force of educators and representatives of special interest groups. Teachers participating in this task force represented different regions of the State and different grade levels (including elementary and secondary) and had content expertise in mathematics and language arts.

Under the direction of the Board, the task force met and developed a set of basic objectives, called proficiencies in Idaho, in each skill area. The defined competencies were then disseminated for review by other teachers, parents, and the general public. Table 1 presents the entire set of proficiency objectives that were then adopted by the Board for the Idaho Proficiency Testing Program.

Standards and Standard Setting

The Proficiency Testing Steering Committee (composed of task force and Department members) set the achievement standards for the proficiency program, and this occurred after the preliminary State test had been field tested and revised on the basis of field test results. In the areas of reading, arithmetic, and spelling, cut-off scores were set for each objective such that mastery was defined as answering correctly so many items of the total number of items for each objective. Since the number of items per objective varies, the actual cut-off scores also vary. The first cut-off scores that were set averaged to an approximate 63-65% mastery level; these were then changed to average 71-75%. Currently, students are required to correctly answer a total of 54 out of 76 items on the mathematics subtest, 45 out of 60 items on the reading subtest, and 16 out of the 21 items on the spelling subtest. Proficiency on the writing sample is considered to be a holistic score of at least 3 on a 1-5 scale; holistic scores of 1 and 2 indicate non-proficiency in writing. In order to obtain the State Board of Education seal on their diplomas, students must obtain passing scores on each subtest and on the writing sample.

Target Groups and Testing Schedule

All ninth grade students who reside in school districts participating in the proficiency testing program must take the Idaho Proficiency Test. Testing is conducted twice in the ninth grade (fall and spring) and then twice each year (fall and spring) after that for students who have not passed all sections of the test. A student need retake only those sections that he/she did not pass at an earlier testing opportunity. Since the program was implemented in 1978, ninth-grade students were tested only once that year--in the spring.

TABLE 1

Basic Proficiencies in Reading, Mathematics, Writing, and Spelling in the Idaho Proficiency Testing Program

Reading

Comprehension Skills. The student should be able to:

1. follow a set of stated directions
2. locate relevant information by selecting facts/details
3. use context to determine word meaning
4. identify sequence of events
5. perceive cause/effect relationships
6. distinguish between fact and opinion
7. make inferences and draw conclusions
8. use punctuation and grammar clues as an aid to gaining meaning
9. recognize the main idea
10. make comparisons and contrasts based on information given in passages
11. make classifications and lists

Study Skills. The student should be able to:

12. use reference skills as applied to parts of books
13. use reference skills as applied to reference documents
14. use reference skills as applied to practical documents
15. interpret maps and diagrams

Mathematics

Mathematics Computation. The student should be able to:

1. add two fractions having unlike denominators
2. multiply and divide any two decimals with no more than two decimal places
3. add and subtract decimal numbers having no more than two decimal places when given in vertical or horizontal format

TABLE 1 (continued)

Mathematics Computation (continued)

4. multiply any two fractions or a fraction and a whole number
5. select equivalent fractions from a list of fractions
6. change a percentage to an equivalent decimal form or a decimal to a percentage
7. change a common fraction to a decimal form
8. add any three whole numbers up to four digits long
9. subtract any two whole numbers up to five digits long
10. multiply any two whole numbers up to three digits long
11. divide any whole number by a one or two digit whole number divisor and write a remainder (if any) as a proper fraction

Mathematics Application. The student should be able to:

12. select appropriate metric units for length, volume (capacity), and weight (mass)
13. convert from one unit of measure to another within the conventional or metric system
14. recognize horizontal, parallel, perpendicular, vertical, and diagonal lines
15. recognize a triangle, rectangle, square, parallelogram, or circle
16. compute perimeters and area of simple polygons
17. solve simple written (story) problems, the solution to which will require at least one of the four fundamental operations with whole numbers
18. find the average of up to five two digit numbers
19. solve written problems, the solution to which will require addition or multiplication of fractions
20. solve a written problem involving a percent of a whole number
21. solve a simple problem involving proportional parts
22. solve a simple problem involving time
23. keep a bank record with simple deposits and withdrawals
24. compute his/her salary based on number of hours employed and salary per hour
25. determine the solutions to real world problems involving purchases totaling less than ten dollars with change from a twenty dollar bill
26. substitute given values into either a formula or equation and obtain the correct result

TABLE 1 (continued)

Writing and Spelling

1. The student will organize material by:
    a. choosing a position
    b. maintaining a position
    c. providing information (evidence, reasons, facts, examples, proofs, experiences)
    d. reaching a conclusion

2. The student should be able to meet the specific demands of a writing task by:
    a. using appropriate vocabulary
    b. following directions of the assignment
    c. observing the format required

3. The student will use the mechanics of written English by:
    a. punctuating appropriately (including capitalization and indentation)
    b. writing complete and correct sentences
    c. writing legibly

4. The student should be able to spell correctly, as measured by an error-based test comprising words chosen from the Dolch list of the 1000 most frequently used words.

The testing of all students occurs during the first two weeks in April and the last two weeks in October on two consecutive mornings within the scheduled two-week period. The testing time required is approximately two to two and one-half hours per day for the two days. The mathematics section of the test is administered the first day, while the language arts sections are administered on the second day. The tests are untimed so that all students will have the opportunity to attempt every item. The writing test, however, which is part of the language arts section, is limited to approximately 40 minutes. After 30 minutes on the writing, students are advised to complete the writing assignment within the following 10 additional minutes.

Test Instruments

After conducting an initial search for a commercial test, the Department of Education found that the particular objectives of the Idaho program could not be met by commercial tests. Financial constraints prohibited outside development of test instruments on a contractual basis. The outcome was an agreement between the Department and Northwest Regional Educational Laboratories (NWREL) which led to the conducting by NWREL of test item writing workshops for members of the task force. NWREL then oversaw the writing, revision, editing, and screening for bias of test items for the reading, mathematics, and spelling portions of the test.

The result was a preliminary version of the Idaho Proficiency Test which consisted of 60 multiple-choice items measuring 15 reading objectives, 76 items measuring 26 mathematics objectives, and 21 items measuring one spelling objective. The spelling test items consist of sets of four words, one of which is spelled incorrectly; the student is then asked to indicate the incorrectly spelled word.

Also included on the preliminary test were three writing assignments, of which the student was to select one in order to demonstrate his/her proficiency on three writing objectives. To solicit suggestions for the writing samples the Department canvassed all English department heads in school districts across the State. After receiving all suggestions, NWREL recommended that three hypothetical letter-writing situations be chosen for the writing portion of the test: a letter to someone expressing an opinion, a letter recommending someone for an award, and a letter of application for a job. The Department adopted NWREL's recommendation.

The Idaho Proficiency Test was then field tested in seven Idaho school districts in the fall of 1978, with approximately 1,000 students participating. The field testing provided performance data on each item on the preliminary test data used to identify those items needing revision. The items which needed revision were determined, and information was gained which was useful for setting the standards for passing. As a result of the field test, some of the items were deleted from the mathematics portion, and the writing sample was revised to include only one assignment. Since students predominantly chose the first of the three choices--the letter expressing an opinion--this was the assignment chosen. In addition, a primary trait scoring method was unsuccessfully tried on the writing sample and a decision made to use holistic scoring. With respect to this method, the Department found that the 1-4 scale did not provide sufficient discrimination between the 2 and 3 levels. They therefore adopted a 1-5 holistic scale, with which scorers were consistent and which provided the extra discrimination they desired.

Field-testing of items remains an on-going process in the testing program. Some of the items in the current form will not count in a student's score since they are being field-tested for future forms. Once item statistics are gathered on new items, they may become a scored and integral part of the test.

Test Administration

Each participating school district is responsible for the administration of all tests. The Department produced a District Coordinator's Manual in order to provide guidance in preparing students, parents and test administrators in the school setting for the testing experience. The manual stresses the creation of a testing atmosphere devoid of stress and distractions and clarity of test directions, and it includes posttesting administrative steps.

The Department provides the actual tests and answer sheets to the local participating districts along with precautions, including a test inventory for use in insuring test security.

Scoring and Analysis

For all of the participating school districts, scoring and analysis of the mathematics, reading, and spelling proficiency tests are done at the state level by the State Education Planning and Reporting System (SEPARS). The response sheets completed by the students are returned by the school districts to the Department for editing and routing.

The writing sample is scored holistically by language arts and writing teachers in grades 8, 9, and 10 who have had five years of teaching experience and are actively involved in teaching writing. These teachers represent different regions of the state and are selected by the Department through a candidate application process. For the 1978-1979 school year, the Department selected seven table leaders and 18 scorers and trained them according to the standard procedure outlined by ETS. These staff scored slightly over 10,000 compositions in 5 days. Each paper was read twice and approximately 20% (about 2000 papers) were given a third reading, thereby yielding approximately 22,000 readings in those 5 days.

Results computed for each individual student include: the number of items answered correctly for each objective and whether or not that score constitutes mastery of the objective. Summary results provided include: the number and percentage of students in the school, district, and state passing each objective; and the percentage of students in the school, district, and state passing the test. The Department reports the results approximately four to six weeks following the test administration.

Reporting/Dissemination

The audiences for score reports that are produced are school staff, parents, and students. Each individual student's profile (number of items answered correctly for each objective, what objectives have been mastered) is sent to his/her permanent record, to his/her parents with an accompanying letter of explanation, and to remedial instructors if remediation appears to be necessary. The State also sends to participating school districts summary statistics of student performance by school, district, and state. Test results on a statewide basis are given to the news media annually in the spring by the Department of Education. Scores of individual students, schools, or school districts are not considered public information, and are not released to the media.

Use and Implications of Test Results

Consequences to students. In the districts which opt to participate in the Idaho Proficiency Testing Program, the passing of the tests by a student is recognized by the placing of a State Board of Education seal on his or her diploma. The graduating class of 1982 will be the first class eligible to receive diplomas which bear this seal. Those students who fail the tests must retake and pass whatever sections are failed in order to gain the diploma bearing the special seal. The State Department of Education also requires local education agencies to provide remedial-tutorial programs to assist failing students.

Consequences to programs. The State anticipates that local districts will organize and provide remedial programs as needed, but it has not prepared guidelines for the development of these programs nor developed monitoring procedures to insure their development. With an increased emphasis on imparting basic skills and objective-oriented knowledge, changes in the curriculum are also expected. Increased communication among teachers, students, parents, and the public and general awareness of the learning objectives are also planned consequences. Planned informational meetings on testing program logistics will bring together educators and district testing coordinators. Already, informal programmatic changes are occurring in the above areas. The State is encouraging the sharing of objectives among teachers and students by distributing sample tests to educators, and workshops dealing with the assessment of writing skills are in the offing.

Provisions for Special Populations

Special education students in participating local districts may, but are not required to, take the Idaho Proficiency Test. If they choose to take the test, such students are required by the Department "to be provided remediation for deficiencies similar to that of other students in order to meet minimum competency standards." The school district child study team responsible for the development of the exceptional student's Individual Education Program determines the appropriateness of the student's participation in testing. This determination insures the written consent of the parents and/or the child (if over age 18) for student participation. Goals in the student's individual education program are expected to reflect appropriate preparation or remediation for successful participation in the testing program" (Manual, p. 5).

Special copies of the test (i.e., Braille, large print, and taped) are available to students with such severe physical handicaps as blindness or deafness. Each local school must provide the appropriate personnel and environment for students taking the test in these forms.

When an exceptional physical handicap exists, the school principal may request a waiver from the State Department of Education, citing the reasons that warrant the request. If the waiver is granted, the special diploma given to students who pass the tests will indicate the waiver. The district has the option to exempt students from participation for the following reasons: exceptional student with physical, emotional, or mental problems; cannot speak or read English; or temporary physical or emotional problems. Provision is also made for the testing of students who transfer from participating school districts into non-participating districts: these students may opt to continue their testing in an adjoining, participating district in order to earn the State seal. In all cases, however, the home district is responsible for providing necessary remediation.

Program Resources and Costs

General program staffing. While the State Board of Education initiated the proficiency testing program, the administration of the program is primarily coordinated by one full-time consultant in proficiency testing. The advisory task force to the Department, which was heavily involved in the test development process, is composed of reading, mathematics, and language arts teachers from various regions around the State, various grade levels, and various special interest groups.

At the local level, participating districts must provide a district test coordinator, who is usually a curriculum coordinator or a staff member from guidance and counseling.

Approximate costs and funding sources. At the State level, the Department budgeted $11,500 in 1978-79 for the development and implementation of the testing program, including task force expenses and travel, NWREL costs and workshops. Local districts pay directly for scoring by SEPARS of mathematics, reading, and spelling items at the rate of $.75 per student. Maintenance of the program is also budgeted at the same rate--$11,500 per year.

In 1978-79, a special appropriation of $16,000 was granted by the legislature at the request of teachers and used to conduct the scoring of the writing sample. With this exception, all State-level funding is provided through a single line item in the State budget. Local districts are granted no funds by the State and, therefore, must independently support local implementatin of the program.

Program Evaluation

Program evaluation in Idaho is slated to occur in 1981, although this is not mandated in any way. There have been no formal evaluation efforts to date, but day-to-day staff feedback is a continuing process. It is anticipated that the development of an evaluation strategy will occur within the next six months. A specific question which has already emerged concerns the costs to participating school districts, i.e., for what activities must they absorb costs and how much money does this amount to.

Future Directions

Because the proficiency testing program currently stands in isolation, the Department is investigating the possibility of developing a statewide assessment program in order to help them gain a complete view of student achievement of basic learning objectives. With respect to the ongoing program, the Department expects to continue the process of item analysis for validation in order to generate new forms of the test. The Department also anticipates that attention will be given to the assessment of students for whom English is not the dominant language, and to a determination of proficiencies in the arts.

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ILLINOIS

The State of Illinois instituted a voluntary minimum competency testing program with the passage of SB238 in 1978. The purpose of the program is to aid local school districts with the development and implementation of "school leaving competencies" which include both academic and life skills. The State is responsible for designing sample procedures and materials, for offering support and assistance to local school districts, and for conducting a policy and cost analysis study of the program. Local school districts are responsible for and have a broad range of options in implementing all other aspects of the program. Illinois emphasizes a high level of community involvement in defining competencies, establishing standards, and selecting test instruments and procedures. Task forces which represent a cross section of the local populations are a key element in the program. Currently, there is no deadline for implementation.

Legislative and Policy History

Policy history. On March 9, 1978 the Illinois State Board of Education passed a resolution urging the General Assembly and Congress to "withhold final action of the proposed legislation mandating minimum competency testing." The resolution also directs the superintendent to draft policy directing the Board to aid and encourage voluntary local involvement with minimum competency testing and to report to the General Assembly within two years the results of the Board efforts, its policy study of the issue, and its recommendations, including cost analysis.

Consistent with the recommendations of the Board's March resolution, the General Assembly recently passed SB238, which directs the State Board and Illinois Office of Education to encourage local districts to establish minimum competency testing, to aid them in implementing their testing programs, and to report results of minimum competency studies to the General Assembly. In an effort to "encourage and assist local school districts to develop minimum competency testing programs" the Board produced Performance Indicators for Competency Assessment: Competencies Catalogue and User's Guide. The materials were gleaned from approximately 10,000 competency statements that had been developed by secondary school districts.

They were compiled, as mandated, between March and December 1978 by personnel of the State Board of Education and the Illinois Office of Education. By June 30, 1980, the Board must submit to the General Assembly its legislative recommendations based on a policy and cost analysis study of the testing program.

Phase of implementation. At this time the adoption of minimum competency testing at the local level is voluntary. Several major districts have minimum competency testing programs or are committed to their development and several more have requested State assistance in defining their programs.

The Board completed the Performance Indicators for Competency Assessment: Competencies Catalogue and User's Guide by December 15, 1978, as required by SB238; the policy study and cost analysis are to be completed by June 1980.

Goals and Purposes

The purpose of the program is to assist local districts in developing and implementing "school leaving competencies." Local districts are responsible for determining program goals and purposes at the local level.

Competencies

Illinois contracted with Northwest Regional Laboratories, which assisted Oregon's minimum competency testing program, to develop both academic and life-oriented competencies. Called "school leaving" competencies, they are "statements of practical knowledge and skills which school districts and their communities believe their students must have before leaving high school" (SBE/IOE, 1978, p. 1), and comprise the "Competencies Catalogue" section of the Performance Indicators for Competency Assessment document.

The catalogue, provided as a resource for local districts, describes in detail a six-step process for defining a district set of school-leaving competencies. The elements of the catalogue are presented in three sections. In Section I, the "Catalogue of Competencies," 178 competencies are presented and coded beneath their appropriate categories and subcategories.

Section II, the "Catalogue of Competencies with Performance Indicators Added," may be used as a resource by districts which have already defined a set of competencies. In this section, each competency is accompanied by at least one performance indicator which provides specific descriptions of the behaviors to serve as "proof" that a competency has or has not been accquired. There are 750 performance indicators in all.

In Section III, "Sample Test Items," items are presented for school districts that are developing objective measures of their competencies. These items may be used as is, adapted, or used as aids to the local development of test items.

The State Board has suggested ten major competencies with subskills in each category; these are presented in Table 1 which follows.

The essential characteristic of the competency selection process is the early and regularly repeated involvement of the community in providing input (SBE/IOE, 1978, p. 6). The Board recommends that a task force of 15-25 members whose views represent a cross section of the community be appointed by the local district superintendent. Then, the six steps that the User's Guide recommends that the local districts follow are:

(1) organize;
(2) orient Task Force;
(3) identify priority competency categories;
(4) determine needed competencies;
(5) prepare priority list of competencies;
(6) secure Board approval.

Throughout the process of competency selection, emphasis is placed on the establishment of a community consensus concerning performance requirements for students.

Standards and Standard Setting

Each local district establishes its own standards relative to how many performance indicators and test items a student must complete before certification of a competency is possible. The level of mastery (the required number of correct answers to pass a test) is also flexible and up to the local districts.

TABLE 1

Competencies

Reading

1. Vocabulary (4 objectives)
2. Signs (1 objective)
3. Sentences (4 objectives)
4. Directions (1 objective)
5. Paragraphs (1 objective)
6. Articles (1 objective)
7. Letters (1 objective)
8. Facts Versus Opinion (1 objective)
9. Reference Skills (2 objectives)
10. General Health Information (1 objective)
11. Drug Information (1 objective)
12. Traffic Signs and Signals (1 objective)
13. Driver's Manual (1 objective)
14. Nutrition Information (1 objective)
15. Sources of Citizen Information (1 objective)
16. Evaluation of Citizen Information (1 objective)
17. Use of Citizen Information (2 objectives)
18. Locating Goods and Services (1 objective)
19. Advertising (1 objective)
20. Product Descriptions and Labels (1 objective)
21. Bills and Invoices (1 objective)
22. Contracts and Agreements (1 objective)
23. Guides and Manuals (1 objective)
24. Travel and Transportation (1 objective)
25. Consumer Publications (1 objective)
26. Information about Jobs (1 objective)
27. Information on the Job (1 objective)

Writing

1. Handwriting (1 objective)
2. Spelling (1 objective)
3. Punctuation and Capitalization (1 objective)
4. Grammar and Usage (1 objective)

TABLE 1 (continued)

Writing (continued)

5. Composition (1 objective)
6. Letter Writing (1 objective)
7. Citizen Letters (2 objectives)
8. Citizen Forms (1 objective)
9. Consumer Forms (1 objective)
10. Consumer Letters (1 objective)
11. Job Search and Application (1 objective)

Listening (6 objectives)

Speaking (8 objectives)

Media and Communication (3 objectives)

Computing

1. Basic Operations on Numbers (3 objectives)
2. Basic Operations on Measures (1 objective)
3. Number Words (1 objective)
4. Number Conversions (3 objectives)
5. Measure Conversions (1 objective)
6. Percents (1 objective)
7. Averages (1 objective)
8. Measurement (3 objectives)
9. Geometry (3 objectives)
10. Time (2 objectives)
11. Maps, Charts, Graphs and Tables (2 objectives)
12. Calculators and Computers (3 objectives)
13. Forms and Taxes (1 objective)
14. Common Consumer Computations (6 objectives)

TABLE 1 (continued)

Computing (continued)

15. Using Tables, Graphs and Charts (1 objective)
16. Salary, Benefits and Deductions (1 objective)

Family Health and Safety

1. Health Principles (9 objectives)
2. Illness Prevention (3 objectives)
3. Signs of Illness (1 objective)
4. Treatment of Illness (2 objectives)
5. Drugs and Health (2 objectives)
6. Community Health (2 objectives)
7. Accident Prevention (1 objective)
8. Accident Treatment (1 objective)
9. Emergency Procedures (1 objective)
10. Safe Driving (7 objectives)
11. Family Responsibilities (4 objectives)
12. Family Planning
13. Child Rearing (2 objectives)
14. Family Problem Solving (2 objectives)

Citizenship

1. The Government (5 objectives)
2. Rights and Responsibilities of Citizens (1 objective)
3. Citizen Participation (1 objective)
4. The Law (2 objectives)
5. Taxes (1 objective)
6. The Environment (1 objective)
7. Government and Community Services (1 objective)
8. American System and Heritage (1 objective)

TABLE 1 (continued)

Consumerism

1. Financial Management (6 objectives)
2. Banking (1 objective)
3. Credit (1 objective)
4. Comparison Shopping (1 objective)
5. Financial Records (1 objective)
6. Consumer Protection (3 objectives)
7. Protection of Possessions (2 objectives)

World of Work and Career

1. Occupational Information (1 objective)
2. Choosing a Career (4 objectives)
3. Getting a Job (1 objective)
4. On the Job (4 objectives)
5. Career Advancement (2 objectives)

Target Groups and Testing Schedule

The groups tested and the testing schedule are entirely at the option of the local districts. In its User's Guide, the Department identifies the decisions that local districts must make and the issues which they must consider in order to make those decisions, but it does not recommend that particular groups be tested or that specific testing schedules be adopted.

Test Instruments; Test Administration; Reporting/Dissemination

As with the other aspects of the Illinois program, selection or development of test instruments, test administration, scoring and analysis, and reporting and dissemination are all responsibilities of the local districts which opt to implement minimum competency testing. The State Board of Education has provided each local school district with a manual of Performance Indicators for Competency Assessment. The manual provides districts with a source for competency indicators of standard performance and sample test items. The manual suggests procedures and instruments local agencies can use to establish competencies. All decisions with respect to testing, however, are made at the local level.

To assist local school districts the State Board of Education conducted a series of seven workshops that provided information on policy issues, administrative practices, and methods of using materials developed by the State agency.

The State agency has also identified and trained a group of consultants and agency staff members in Program Service Team offices to assist local school districts in establishing minimum competency testing programs. Technical assistance can be secured by local school districts from their Regional Programs Service Team or the seven Regional Instructional Center for Educational Improvement--seven centers established to support technical assistance projects for local districts.

There is no legislated requirement for reporting test results; the Board, however, strongly recommends that the "district set of competencies be made public . . . along with a brief rationale for and description of the proposed use of the competencies in the schools" (SBE/IOE, 1978, p. 32).

Use and Implications of Test Results

Consequences to students. School-leaving competencies may be tied to promotion, retention, remediation, graduation, or differentiated diplomas at the discretion of the local districts. At present, the Department makes no recommendations for the use of student test results.

Consequences to programs. Local districts make their own decisions about whether, or how, to integrate testing programs with instructional programs, with no recommendations coming from the State.

Provisions for Special Populations

The Illinois State Board of Education has identified needs of special populations as a factor to consider in the upcoming policy study. To date, however, no specific provisions for special populations have been adopted.

Program Resources and Costs

General program staffing. The State staff consists of two members (one full time, one three-fourths time) who are to develop the support materials for the local districts and conduct the statewide policy study of minimum competency testing. Local districts are responsible for staffing their own programs.

Costs. There were no cost figures available. The cost analysis, part of the policy study due June 30, 1980, should provide specific cost information.

Funding sources. Aside from the two Board staff positions which are paid for by the State, most funds come from the local districts. Some Title IV funds are available to local districts which may also apply for mini-grants from the State through the program service teams.

Program Evaluation

Program evaluation is to be part of the policy study currently being formulated by the Illinois State Board of Education.

References

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GARY, INDIANA

Gary, Indiana, is among the first cities in the country to mandate minimum competency testing in basic skills as a prerequisite for high school graduation. Low student test scores in basic skills prompted the introduction of a minimum competency testing program. Results from the Stanford Test of Academic Skills, administered to seniors, revealed that 10% of the seniors in the class of 1974 read below the sixth-grade level.

The Gary Superintendent of Schools and his staff, in the summer of 1974, invited local representatives of major industrial firms, representatives of the Gary business and industrial community, and representatives of the armed forces, to a discussion about the level of basic skill proficiency demonstrated by Gary high school graduates. Those at the meeting indicated that they shared with the community at large a serious concern about the fact that many graduates in the Gary school system were deficient in the basic skills.

In September 1974, the Gary School Board of Trustees approved a policy requiring that all students demonstrate proficiency in reading, writing, speaking, and mathematics prior to graduation from high school. The class of 1977 was the first required to pass competency tests in reading and mathematics in addition to meeting traditional graduation requirements. Competency requirements in the other two areas are being phased in gradually. In addition to demonstrating proficiency in reading and mathematics, students in the class of 1978 were also required to pass competency tests in the area of writing. Seniors in the class of 1980 must pass competency tests in oral communication as well as the other competency tests.

Legislative and Policy History

Policy history. Both low test scores in basic skills and the concern of representatives from the business community and the armed services prompted Gary administrators to propose implementing a minimum competency testing program. Scores from the Stanford Test of Academic Skills revealed that 10% of the seniors in the Class of 1974 were reading below the sixth-grade level and that the average score in reading for this class was 8.6.

In the summer of 1974, the Superintendent invited representatives from industry and the armed services to discuss their views of the abilities of Gary graduates and the preparation which students received in the Gary schools. These representatives shared concerns about the difficulties graduates had in meeting requirements such as apprenticeship examinations, and in communicating adequately both orally and in writing.

Consequently, administrators recommended to the School Board that students be required to demonstrate proficiency in basic skills prior to graduation from high school. In September 1974, the School Board adopted a policy stating that students must demonstrate proficiency in reading, writing, mathematics, and oral communication in order to receive a high school diploma.

Phase of implementation. The policy adopted by the School Board specified that the competency requirements be implemented gradually. The class of 1977 was the first required to pass competency tests in reading and mathematics. Basic skills tests in writing were added in 1978. In 1980, a student must demonstrate proficiency in oral communication, as well as in the other basic skill areas in order to receive a high school diploma.

Goals and Purposes

The major goal of the Gary program is to ensure that students learn basic academic skills. Specifically, the program is aimed at identifying those students in need of remediation and to provide it in the competency area(s) indicated above.

Competencies

Secondary school teachers, administrators, and counselors in the Gary school system prepared the competencies in the areas of reading, mathematics, writing, and oral communication during the 1974-75 school year. The choice of competencies reflects an emphasis upon basic school skills rather than life skills. The School Board decided to test the former rather than the latter on the grounds that schools are best suited to teach basic skills and that mastery of basic skills is a prerequisite to the application of these skills in settings outside of school. A task force composed of teachers, counselors, and administrators developed 22 competencies in reading. The competencies test a student's ability to draw inferences, to use tables and charts, and to complete standard forms (e.g., a job application). A committee composed of teachers and administrators developed 23 competencies in mathematics to test mastery of the four basic operations (i.e., addition, subtraction, multiplication, division). Competency in writing is demonstrated by writing a paragraph on any subject and answering objective questions on grammar and punctuation. A committee of teachers also developed seven behavioral objectives for use in rating oral presentations by students. These objectives are: articulation, rate, volume, verbal utterances, pronunciation, word usage, and voice quality.

Standards and Standard Setting

Standards for the competency tests were set either on the basis of empirical evidence or by consensus of the committees which develop the competencies.

The standard for the reading test was set by the task force for this competency area using the contrasting groups method. Teachers classified students as masters or nonmasters with respect to the competencies before each group took the reading test. Test scores of these groups were then compared. In order to demonstrate proficiency on this test, a student must pass 75% of the 22 objectives; mastery of an objective is attained by correctly answering two of the three items that measure it.

The standard for the mathematics tests was determined by the consensus of the committee. A student must master 75% of the 23 objectives in order to pass the test.

There are two separate tests in writing: an essay test, and a standardized test covering punctuation and grammar. Standards for the tests were set by the English teachers. Each essay test is scored holistically by two raters using a scale ranging from 1-4. A student must receive a combined score of 6, 7, or 8 in order to pass. The second test consists of objective questions on the mechanics of writing. In order to pass the test, a student must master 75% of the competencies.

Raters also assess oral communication. Three speech teachers rate each student, who must deliver a two-minute presentation, on the basis of seven objectives. Each teacher rates the presentation on its general acceptability, and at least two of the three teachers must rate the presentation as acceptable in order for the student to pass. In cases where a student does not pass, the teachers talk with the student about the specific objective that he or she had difficulty with. This standard was set by the communications teachers who developed the objectives.

Target Groups and Testing Schedules

The Gary program calls for different testing schedules in the four competencies currently mandated: reading, mathematics, writing, and oral communications. The reading test is administered first to freshmen in the spring and then at the end of each semester thereafter through grade 12. The rationale for this schedule is that it gives a student almost a full school year in which to adjust to high school before taking the test; the schedule, nevertheless, allows sufficient time for the student to receive remediation, if necessary, prior to graduation. Mathematics testing begins in the second semester of grade 10, and later testing occurs at the end of each semester through grade 12. Writing tests are administered at the end of the second semester of grade 9 and at the end of every semester thereafter. Students may also take the tests in summer school. The oral proficiency test is first administered at the end of the first semester of grade 10, and is offered again each semester thereafter through grade 12.

Test Instruments

Test instruments were developed either by teachers, Westinghouse Learning Corporation or Educational Testing Service (ETS); the tests were based on the competencies identified by committees in the four areas of reading, writing, mathematics, and oral communication.

Westinghouse selected test items from an item bank to measure each of the 22 competencies in reading. The task force reviewed the items and the items selected were then field-tested on members of the class of 1975. Two forms of the criterion-referenced test were created, each with 66 test items. Three items measure each objective; mastery of an objective is defined as answering at least two of the three items correctly.

Faculty from the University of Chicago testing the items for racial and sexual bias with the Rasch model concluded that the items are not biased.

Writing is assessed by requiring students to write a paragraph on a subject of their choice, and to answer questions on grammar and punctuation. After developing the writing competencies during the 1974-75 school year, the committee in this area selected an ETS Writer's Skills Test to measure students' command of grammar and punctuation. The test consists of multiple-choice questions.

In mathematics, department chairmen at the secondary level worked during the 1974-75 school year to develop 2,000 items to test students' mastery of addition, subtraction, multiplication, and division. These items, which were based on the competencies developed by the committee in this area, were field-tested and several forms of the test prepared. Each form contains 45 items.

To demonstrate proficiency in oral communication, a student must deliver a two-minute presentation before three speech teachers. Each teacher rates the presentation on its general merits, keeping in mind the seven objectives set for this area. These objectives were developed by the communications teachers at the secondary level, who decided that at least two of the three teachers must rate the presentation as acceptable for a student to pass the test.

Test Administration

The competency tests were first administered to students by their classroom teachers during the 1975-76 school year. Administration of the tests under these circumstances led to the loss of test forms. It was also discovered that some classroom teachers had helped their students. School administrators, therefore, to preserve the security and integrity of the tests, arranged for the majority of tests to be given in a large group setting by staff who were not the classroom teachers of the students being tested. The reading test is now given in a large group setting, and those administering the tests sign for the tests. The tests are counted and numbered prior to distribution. The mathematics and writing tests are also given in large groups, and the same precautions are taken. For the oral proficiency test, which is given on an individual basis, the speech teachers who act as judges never rate students from schools in which they teach. Rather, teachers are sent to schools to test students they have not taught in order to eliminate bias in the testing situation.

In an effort to minimize irregularities in test administration, school administrators also appointed a Basic Skills Coordinator in each high school. The Coordinators are responsible for picking up tests from the main office, distributing and collecting materials, and supervising the testing. Irregularities such as absences are handled on an individual basis by the Coordinator or by the staff members administering the tests.

Scoring and Analysis

Gary school personnel, using the District's computer facilities, score the tests in reading, mathematics, and writing. The reading and mathematics tests are analyzed by objective; the writing test is analyzed by item.

Both the essay tests and the oral proficiency examination are scored by teachers in the appropriate content areas. In the case of the former, English teachers were trained in holistic scoring by staff members from the Educational Testing Service. Two teachers read an essay and each assigns it a rating on a scale of 1-4. The score for the essay consists of the two separate ratings added together.

In order to rate students on their oral presentations, speech teachers were trained to judge presentations holistically; nevertheless, the seven objectives play a part in determining the overall rating. Presentations are rated as acceptable or unacceptable. A student who fails the test in oral communication is told which objectives require further study.

Results of both the essay tests and the oral communication tests are then sent to the Central Office.

Reporting/Dissemination

A Basic Skills Coordinator in each high school is responsible not only for distributing and collecting test materials, but also for picking up test results from the Central Office, and distributing the information about test results to administrators and remedial teachers. Administrators in the Central Office receive summaries by grade level and by building of the numbers of students who have passed, failed, or not taken each of the competency tests. Building administrators receive an alphabetical listing by grade for student scores on each of the tests. If a student has failed a test, the report indicates which objectives or items, in the case of the writing test, were missed.

The appropriate remedial teachers also receive information on which objectives or which items each student failed. Results of the oral proficiency examination indicate whether a student passed the test, and if he/she did not, which objectives he/she had difficulty with.

Use and Implications of Test Results

Consequences to students. Students who do not pass tests in the four areas prior to graduation do not receive a high school diploma. Those who fail the tests have opportunities to take them again both in regularly scheduled sessions during school hours, and in summer school and night school. Students who fail the tests receive remedial help in the form of special classes.

If a student masters 50% or fewer of the reading objectives, he or she is assigned to a Reading I class, which emphasizes word attack skills. If a student masters between 55% and 75% of the objectives, he/she is assigned to a Reading II class to work on reading comprehension.

Remedial classes in mathematics are offered to juniors who do not pass the competency test in this area. Worksheets for the test objectives have been developed by mathematics teachers from the high schools.

Students deficient in writing skills enroll in basic English composition laboratories instead of regular English classes.

Students who fail the oral proficiency examination are screened by a speech pathologist, who determines the appropriate remedial assistance.

Students may also enroll in speech classes, which have become a regular part of the curriculum since the introduction of the competency requirement in this area.

Consequences to programs. The Gary minimum competency testing program has underscored the importance of teaching basic academic skills. In-service training for secondary teachers now focuses on teaching basic skills within the context of high school courses. The introduction of the program has led to the addition of remedial classes and teachers. Another important consequence of the program is the review which administrators and teachers are conducting in the four competency areas at all levels of the curriculum, in order both to strengthen the teaching of basic skills, and to develop better ways of identifying students who need assistance before they enter high school.

Provisions for Special Populations

The policy adopted by the School Board in 1974 exempted from the competency requirements all students qualifying for special education. Blind and partially-sighted students, who have always been tested, do not usually qualify for this exemption.

Program Resources and Costs

General program staffing. The testing program is under the general supervision of an administrative assistant in the Central Office. There is also a Basic Skills Coordinator in each of the Gary six high schools. The Coordinators are responsible for distributing and collecting the test materials and results, and for supervising the testing. The addition of remedial classes in reading created several new staff positions. Teachers were also hired in order to teach classes in oral communication and to administer the competency test in that area.

Approximate costs and funding sources. Funds for all program costs come from the school budget. The total annual district budget is approximately $50,000,000 a year, and administrators estimate that the costs during the first year of the program, during which tests were developed and new staff positions created, totaled approximately $1,000,000.

Program Evaluation

No formal evaluation of the program has been conducted to date. However, Gary administrators point out that the number of graduates passing apprenticeship examinations has increased since the introduction of the program. They also report that comparisons of test scores indicate that more students are reading at grade level now than three years ago.

Future Directions

In order to better prepare students in the areas of reading, mathematics, writing, and oral communication, Gary administrators and teachers are in the process of reviewing the curriculum in these areas and developing checkpoint tests. In reading, teachers have prepared objectives for grades 2, 5, and 7. Westinghouse has selected appropriate items for these objectives from its item bank. Both functional and remedial reading classes have been set up in the elementary and intermediate schools. Checkpoint tests in mathematics have also been developed for grades 2, 5, and 7. In the second and fifth grades, writing laboratories have been instituted, along with checkpoint tests in grades 5 and 7. Teachers are also developing a test in oral communication for seventh-grade students. The School Board has also adopted a policy stating that all students must pass all checkpoint tests before entering high school.

Gary administrators are also planning to raise the standard on the reading test. Beginning in September 1980, a student must master 80% of the objectives in order to pass. This change was prompted by increases in the number of students passing the test since its introduction.

In addition to introducing competency testing in the four areas into the elementary and middle schools, Gary administrators are also developing competency tests in five areas corresponding to courses of study: (1) academics, (2) fine arts, (3) business, (4) practical arts, and (5) technical studies. Students graduating in the class of 1982 will be required to pass a test in an area of their own choosing, in addition to meeting competency requirements in the four areas currently mandated.

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BETTENDORF, IOWA

In March 1977, the Bettendorf, Iowa School District began to consider the possibility of requiring students to pass a minimum competency test in order to graduate from high school. The Board of Education felt that such a requirement would enhance the value of a high school diploma as well as guarantee to the public that students have acquired basic skills in reading, language arts, and arithmetic computation. It was also thought that test results might suggest some shifts in curriculum emphasis.

As a result of its study, the Board mandated minimum competency testing for the 1981-82 graduating class. Testing occurs twice a year, beginning at the tenth-grade level; students who fail the tests receive remediation. A student who has passed the examination will be exempted from further testing, although no early exit will be allowed.

Legislative and Policy History

Policy history. In 1977, Bettendorf Community School District officials convinced the Superintendent of Schools and the Board of Education of the desirability of conducting a study of minimum competency testing. The chief reason for initiating this study was the fact that the State of Iowa has been considering mandating minimum competency testing statewide; the Bettendorf school system, however, preferred to have its own program than to have to comply with a state-mandated minimum competency testing program at some time in the future.

During the study, which began in March 1977, an appointed committee of school district personnel selected the Adult Performance Level (APL) program as the instrument for testing reading, mathematics, and language arts. A locally designed and scored writing test has also been administered to third-, fifth-, seventh-, ninth-, and eleventh-graders for three years. According to a 1977 policy adopted by the Board of Education, any minimum competency testing program for Bettendorf schools is to include (but is not necessarily limited to) an assessment of competencies in the basic skills of reading, language arts, writing, and arithmetic computation.

At the completion of the study in 1979, the Board of Education decided that all Bettendorf graduates, beginning with the class of 1982, must demonstrate minimum competency in reading, language arts, writing, and arithmetic computation prior to receiving a high school diploma. The class of 1982 is the first subject to these requirements.

During a pilot testing phase (March 1979-June 1981), information is to be collected that will permit a steering committee to set standards on the APL and writing tests selected during the study phase. The committee consists of a senior and a junior high school principal, a counselor, two elementary and two middle school teachers working under the leadership of the Assistant Superintendent of Schools. Both the Board of Education of the Bettendorf Community School District and the parents who make up the Citizens Education Council have been involved in all stages of the minimum competency testing study and have given the steering committee full backing.

According to the Assistant Superintendent, it is possible that the Bettendorf Community School District may phase out its minimum competency testing program if it appears that there will be no state-mandated program, or if excessive litigation develops. The fact that its school population currently tests very well in comparison to national averages might also lead Bettendorf to end the minimum competency testing program.

Phase of implementation. The minimum competency testing study ended early in 1979 with the selection of the APL high school competency test designed by the University of Texas at Austin. The test was given in the spring of 1979 to a random sample of 188 grade 10 students (about 50% of the class). An adult APL test was given at the same time to a sample of 100 adults in Bettendorf in order to establish a community norm for student competency comparisons. The competency areas tested were language arts, computational skills, and reading.

In the 1979-80 school year, the Bettendorf Community School District plans to give the APL test to all students in grades 10 and 12. The Community School District considers this APL testing to be part of the pilot stage of its minimum competency testing program, and it will have no consequences for those students taking it as far as graduation is concerned.

Goals and Purposes

The goal of the Bettendorf Community School District program is to guarantee to the public that students graduating from Bettendorf high schools have "minimum educational competency in reading, language arts and arithmetic computation."

Competencies

The Bettendorf minimum competency testing program employs the APL high school competency test in three areas: language arts, reading, and computational skills. The Bettendorf Community School District has developed its own writing test, described as a Writing Sample. The Writing Sample has been used to test the writing skills of students in grades 3, 5, 7, 9, and 11 for three years. Student compositions must be acceptable in each of the following categories: ideas, style, and vocabulary; spelling; mechanical conventions; grammar and usage; sentence structure; and organization and paragraph development. It is anticipated that, upon the initiation of minimum competency testing in the 1981-82 school year, the Bettendorf Community School District will continue to use its own Writing Sample rather than the writing test supplied in the APL high school minimum competency test.

Competency areas were selected according to an adopted policy of the Community School District Board of Education. Competencies are defined by the APL program as those skills "necessary for minimum levels of educational and economic success in American society" (ACT, p. 1).

Standards and Standard Setting

Standards on the APL test are to be established by the steering committee and will be in the band range of 22 to 31, or 55% to 78%. This is likely to be somewhat higher than the national APL passing cutoff point of 22 out of 40 items tested. This estimated standard was derived by giving the high school APL test in the areas of language arts, computational skills, and reading to a sample of 188 students in grade 10 in the spring of 1979 and comparing their scores with those of a random sample of about 100 Bettendorf parents and registered voters who also took the APL adult minimum competency test. More precise standards will be set at the completion of the pilot testing phase.

As previously mentioned, Bettendorf has developed its own writing skills test. These writing samples are assigned a score of 1-4 by two locally trained scorers; a combined score of 5 ("grade level") is considered acceptable.

Target Groups and Testing Schedule

When the testing program has been fully implemented, all students in grades 10 and 11 will take the APL high school minimum competency test twice a year, in the fall and spring. Students in their senior year may retake the test at their school principal's discretion. Once a student achieves the cutoff score, he or she is not required to take the test again. The rationale for administering the APL high school tests to the grades selected is that these match national APL testing levels.

The writing test is currently administered in grades 3, 5, 7, 9, and 11.

Test Instruments

The Bettendorf Community School District has selected the high school version of the APL minimum competency test in the areas of language arts, reading, and computational skills. The APL test evaluates these skills in the content areas of community resources, occupational knowledge, consumer economics, health, and government and law. There are two forms, each containing 40 items.

The Bettendorf School District produces its own writing test which evaluates student compositions in each of the following categories: ideas, style and vocabulary, handwriting, spelling, mechanical conventions, grammar and usage, sentence structure, and organization and paragraph development. Topics for the Writing Sample were developed along the following guidelines:

> 11th question should be somewhat abstract--permit imaginative answers--lend itself to both opinionated and expositional answers--require supporting development, particularly use of logic or reason.

> 9th question should be more expositional in nature--lend itself to a clear thesis statement--suggest a pattern of development--permit use of personal experience or observations as support.
>
> 7th question should emphasize use of personal experience or narrative form--allow easy development of supporting information--should suggest an essay which has a beginning, middle and end.
>
> 5th question should emphasize description--place students in a situation permitting observation--allow free use of imagination.
>
> 3rd question should lend itself to natural development--should permit students to easily get started--perhaps role playing or fantasy--allow personal feeling.
>
> (Bettendorf, 1978, pp. 3-4)

It should be emphasized that the Writing Sample is not the only indicator used to evaluate student competency in writing.

Test Administration

The APL test is administered by guidance counselors during regular class periods. There is no pretest practice for this test, and it is untimed.

The Writing Sample is given by individual classroom teachers who read the topics and discuss possible student responses one day prior to administration. Time allowed ranges from one hour in grade 3 to 40 minutes in grades 9 and 11. For both tests, makeup dates are set for those absent during scheduled testing times.

Scoring and Analysis

In competency areas covered by the APL, raw test scores achieved by Bettendorf high school students are compared with local, regional, and national norms expressed in raw score form. From these data a general norm summary is prepared as well as individual and group profiles. The individual student APL test scores are mailed to parents a month after each test, along with national and regional comparison scores. The individual scores become part of the permanent record of each student.

Each Writing Sample is scored by two locally trained graders. Each grader assigns a score from 1 to 4. The scores are then combined; in order to pass the test, a student must receive a combined score of 5 or more. Scoring for the 1978 Writing Sample was highly consistent, and a "severe discrepancy (two-point difference, i.e., 1 and 3, 2 and 4) occurred in less than 1% of the papers" (Bettendorf, 1978, p. 5).

Reporting/Dissemination

Parents of students who do not pass the APL minimum competency test are so notified by certified mail, and invited to discuss a plan for remediation. Parents who do not respond are then informed that a remediation plan will be developed for the student, if they desire.

The Writing Sample papers are returned to the respective classrooms to be discussed with and returned to the individual students by their teachers; papers and grade sheets are then sent home with the students for parent reference (Bettendorf, 1978, p. 4).

Use and Implications of Test Results

Consequences to students. Passing the APL minimum competency test will become a prerequisite for graduation in the 1981-1982 school year. If a Bettendorf student fails the APL test, he or she will be awarded a certificate of completion rather than a diploma.

Consequences to programs. The results of the Bettendorf Writing Sample competency test have already prompted the redesign of the Community School District language arts program and the establishment of a writing laboratory. It is also anticipated that a mathematics laboratory and a life-skills program will be initiated by the Bettendorf school system. Further, it is foreseen that minimum competency testing will, in general, lead to a greater focus on basic skills in the curricula of Bettendorf schools. There are, however, no mandated consequences to existing programs.

Provisions for Special Populations

There is currently no provision in the Bettendorf minimum competency testing program for special education students or for other special populations. Such populations are small in Bettendorf and, although there is disagreement in the steering committee as to whether special education students should be tested, at present there are adequate resources in the school system to give individual attention to these students. This situation may change, however, if, in the future, the State adopts a minimum competency testing program with guidelines and/or legislation for testing special education students.

Program Resources and Costs

General program staffing. The testing program is handled by existing staff, and is managed by the Assistant Superintendent for Instruction. The mathematics and language arts labs, a resource for those students who do not initially pass the competency test, are run by two newly hired remediation teachers.

Approximate costs. To date, the Bettendorf minimum competency testing program has cost about $1,500 per year for test instruments and from $500 to $1,000 annually in curriculum improvement. The major cost, $30,000 per year, has been for the employment of two remediation teachers, one in mathematics and one in language arts.

Funding sources. Funds for the Bettendorf minimum competency testing program are provided for in the city's Community School District budget. No Title I funds are used.

Program Evaluation

The Bettendorf Community School District is planning to call upon the University of Iowa for consultant evaluation of its minimum competency testing program. An internal evaluation of the program is also contemplated. At this time no date has been specified for either evaluation, nor have the outlines for such evaluations been established.

Future Directions

At present, the Bettendorf Steering Committee feels that the program is evolving in a satisfactory manner, primarily because it has been developed within the community. However, it is felt that the question of minimum competency testing of special education students must soon be resolved. It is also believed that there may be a need in the future for additional APL tests for competency areas which are not now covered in the program, and for a study to determine the impact of the program.

References

American College Testing. User's Guide: Adult APL Survey. Iowa City, Iowa, 1976.

Iowa, Bettendorf Community Schools. Writing Sample II Report. Bettendorf, Iowa, 1978.

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KANSAS

In 1978, the Kansas Legislature enacted Senate Substitute for House Bill No. 3115 (HB 3115), requiring the State Board of Education to implement a statewide pilot assessment program in reading and mathematics. The program is designed to provide the legislature with information to be used in deciding whether or not to implement a system of competency-based education, and it consists of two stages. During the first pilot test year, 1978-79, a sample of students in grades 2, 4, 6, 8, and 11 were tested in reading and mathematics. In the second year of the program, 1979-80, all students in accredited schools at those grade levels will be tested on the same skills. At the close of this two-year study, the State Board of Education will submit the results of the program to the Kansas legislature for review and deliberation.

Legislative and Policy History

Policy history. In 1978, after noting that other states were beginning to institute competency testing and speculating as to whether minimum competency testing could improve public education in Kansas, the Kansas legislature enacted Senate Substitute for House Bill 3115. HB3115 takes the position that one of the goals of education is to provide students with the skills required to function in a complex society; the legislation goes on to prescribe the development of a two-year pilot assessment program aimed to determine whether or not this goal can be accomplished by means of a system of competency-based education. Specifically, the legislation directs the State Board of Education to prepare and distribute both the standards of competency in basic skills and the assessment instruments to local school boards. The results of the pilot assessment program are to become the basis of a report which the Kansas State Board of Education is to prepare for the legislature. The legislature will then consider whether the details of the report justify the establishment of a statewide system of competency-based education for Kansas students.

Phase of implementation. In the first year of the pilot testing program (the 1978-79 school year), the State Department of Education in response to the legislative mandate, established minimum objectives in reading and mathematics for students in grades 2, 4, 6, 8, and 11, and defined minimum standards of competency in these areas for those grades. In addition, tests instruments based on the objectives were prepared and administered in April 1979 to a sample of 5,000 students from volunteer accredited schools. Data from this initial testing will be used to refine the tests. In the 1979-80 school year, the revised tests will be administered to all students in grades 2, 4, 6, 8, and 11 who attend accredited public or private schools in Kansas. The legislature will study and evaluate the findings of the two-year pilot program during the interim between the 1980 and 1981 sessions and during the 1981 regular session.

Goals and Purposes

General goals. According to the legislature, the goal of the educational system in Kansas is to ensure that pupuls acquire "at least the minimum skills necessary to function and survive in today's society" (Senate Substitute for HB3115). The intent of Senate Substitute for HB3115, then, is to provide a means for the State and educational system to determine whether that goal may be achieved through competency-based education.

Specific purposes. The specific purpose of the statewide assessment program, therefore is to provide the Legislature with information about the performance of Kansas students in basic skill areas and about the problems and needs that arise when local boards attempt to develop and implement a system of competency-based education.

Competencies

The legislation mandates the preparation and distribution of competency standards only for reading and mathematics. Although there was interest among legislators to assess writing skills, since both the technical issues associated with measuring writing skills and the funds appropriated for the pilot assessment were limited, the competencies were restricted to the areas of mathematics and reading. That the schools prepare students to assume their adult roles is seen as one of the major goals of education. Therefore, the eighth- and eleventh-grade tests require the application of reading and mathematical skills not only in an academic context, but in practical, life-oriented situations as well. Students in the second, fourth, and sixth grades are tested on the skills in reading and mathematics that must be mastered before a student can go on to achieve competency at the next level.

The development of objectives occurred in a two-step process. In the spring of 1978, the State Department of Education requested local school districts and professional educational associations to nominate people to serve on the Criterion-Referenced Test Steering Committee. From the names submitted, the State Department of Education selected the 26 members of the Steering Committee to represent the different geographical regions of the State and a variety of audiences, including parents, teachers, administrators, and curriculum specialists.

The Steering Committee drafted the preliminary objectives in reading and mathematics for grades 2, 4, 6, 8, and 11. These objectives, in the form of a memorandum from the State Commissioner of Education, were sent to all chief school administrators in Kansas, who were asked to solicit the opinions of teachers, students, and community members as to the relative importance of each objective. The reviewers could also suggest other objectives for inclusion. After this statewide review, the Steering Committee prepared a final list of objectives to be assessed in the 1978-79 phase of the pilot study. There are 15 objectives in reading and 15 in mathematics at the second-grade level, and 20 objectives in each area for grades 4, 6, 8, and 11. The objectives chosen do not necessarily have curricular or instructional validity; rather, they reflect skills which the Steering Committee and the reviewers consider that the student must master before going on to achieve at the next level. Samples of these objectives at every grade level are presented in Table 1.

Standards and Standard Setting

Senate Substitute for HB3115 delegated the responsibility of setting standards to the State Board; according to the standard which the State Board set, a student must answer correctly at least two of the three test items measuring each objective.

The State Board has not yet determined the standards for the test instruments to be developed for Phase II.

TABLE 1

Samples of Reading and Mathematics Objectives Developed for Grades 2, 4, 6, 8, and 11 in the Kansas Pilot Assessment Program

Reading

GRADE 2: (15 objectives)	1. Given a set of letters, the learner will identify the one letter that is a vowel.
	15. Given a set of letters, the learner will identify identify the alphabetical order of the letters.
GRADE 4: (20 objectives)	1. Orally given a word that has the short vowel sound $|\overset{u}{a}|$ or $|\overset{u}{e}|$ or $|\overset{u}{o}|$, the learner will identify a word that has the same short vowel sound.
	20. Given a sample index page, the learner will identify page references for a specific topic.
GRADE 6: (20 objectives)	1. Given a contraction, the learner will identify the two words that form the contraction.
	20. Given a sample index page, the learner will identify page references for a specific topic.
GRADE 8: (20 objectives)	1. Given a word with a common prefix and the meaning of its root, the learner will identify the meaning of the word.
	20. Given an ad, the student must be able to identify the facts presented.

TABLE 1 (continued)

Reading (continued)

GRADE 11: (20 objectives)	1. Given a catalog description and an order form, the student will identify the correct placement of the item's color, code number, price, weight, size, mailing charges, and description.
	20. Given a statement from a business, the student must identify the item purchased, the cost, and the date payment is due.

Mathematics

GRADE 2: (15 objectives)	1. Given four numerals, the learner will identify the one that represents a number between 10 and 100 as specified.
	15. Given a picture of one to five pennies, the learner will identify the number of cents.
GRADE 4: (20 objectives)	1. The learner will identify the *word name* for a three- to four-digit number.
	20. Given a one-step *word problem* that can be solved by multiplication or division, the learner will solve the problem.
GRADE 6: (20 objectives)	1. Same as Grade 4.
	20. The learner will identify the *average* (mean) of a given set of whole numbers.

TABLE 1 (continued)

Mathematics (continued)

GRADE 8: (20 objectives)	1.	The learner will *add* three numbers greater than 10,000.
	20.	Given travelling time and rate, the student must determine the distance travelled.
GRADE 11: (20 objectives)	1.	The learner will identify the *average* (mean) of a given set of whole numbers.
	20.	Given the measurements of a room, the student must determine how much floor covering is needed.

Target Groups and Testing Schedule

The legislation mandating the pilot assessment program calls for testing of students in grades 2, 4, 6, 8, and 11 during the 1978-79 school year in every school district and in every accredited nonpublic school which volunteered for the pilot program. In the spring of 1978, the State Department of Education contacted all school districts in the State, requesting volunteers for participation in Phase I. Out of a possible 320 school districts, 194 volunteered to participate. In April 1979, approximately 5,000 students from grades 2, 4, 6, 8, and 11 were tested. This sample was stratified on the basis of school size and cost per pupil, and represents approximately 3% of the students at each grade level.

According to the legislation, during the second phase all students attending accredited schools in Kansas in grades 2, 4, 6, 8, and 11 will be tested. This testing is scheduled to occur in April 1980.

Two factors led the State Department of Education to choose April as a testing date: (1) the timeline for program implementation mandated by the legislation, (2) the decision to include objectives that measure the skills students are expected to acquire in the second, fourth, sixth, eighth, and eleventh grades. In other words, April was the earliest date that the tests could be ready.

Test Instruments

In the spring of 1978, the Kansas State Board of Education contracted with Science Research Associates to develop test items measuring each objective developed by the Steering Committee and adopted by the Board. Science Research Associates produced three multiple-choice items to measure each learning objective. At the second-grade level, therefore, the reading and mathematics tests each have 45 items; the reading and mathematics tests for grades 4, 6, 8, and 11 each have 60 items. Although the tests are not timed, the contractor estimates that students can be expected to complete a 60-item test in an hour.

Results from the 1978-79 tests will be studied by Objective-Review Committees representing the areas of reading and mathematics. Committee members include members of the Steering Committee as well as curriculum specialists from local school districts. The two committees are responsible for recommending changes in the original set of objectives. Any recommended changes must be submitted to the Steering Committee and to the State Board of Education for final approval.

Following this process, the revised objectives will be used by an outside contractor to develop new test items for Phase II of the program.

Test Administration

Tests were administered to the stratified random sample of approximately 5,000 students during the month of April 1979. The State Department of Education requested each volunteer school district to appoint an assessment coordinator. Department of Education staff members then trained the coordinators, who were responsible for maintaining test security, randomly distributing the test materials, and collecting them. The district assessment coordinator was also responsible for handling any irregularities. Assessment coordinators for the 1979-80 test sessions will have the same responsibilities and will also receive the same training from the State Department of Education. The local school district was responsible for specifying a location and a date during the month of April for the testing sessions.

Scoring and Analysis

All scoring is the responsibility of the testing contractor. For the first phase of the two-year pilot program, the contractor will prepare for the State Department of Education a group summary report and a group mastery distribution. The summary report will indicate the objectives tested, the number of students tested, the percentage of students answering each item correctly, and the percentage of students who mastered each objective. The group mastery distribution will indicate the number and percentage of objectives, and the number and percentage of students mastering a particular number of objectives or more. For the 1979-80 assessment, the testing contractor will report additional information as described in the following section.

Reporting/Dissemination

From the group summary report and group mastery distribution of the first test administration, the Department of Education will, in turn, prepare a report to be sent to all local school districts, the State Board of Education, the legislature, and the Governor. In reporting 1979-80 test results, the contractor will furnish each school district with the following: a list report (by whatever grouping the local district designates) showing mastery or non-mastery of each objective for each student, and the total number of students who mastered each objective; an individual student report showing mastery by objective, correctness of response for each item, and the number and percent of objectives mastered; a group summary (by group, school, and system) showing the percentage of students answering each item correctly and mastering each objective and the percent of objectives mastered; and a group mastery distribution (by group, building, and system) showing the frequency and accumulated percentage distributions in relation to the number and percent of objectives mastered by the student.

In the 1979-80 school year, the testing contractor will provide the State Department of Education with a group summary and a group mastery distribution. In addition, the contractor will also supply the Department of Education with two additional documents: a technical manual containing psychometric information on the reliability and validity of both test items and instruments and a group summary of school districts. The last two documents will show the percentage of students answering each item correctly, the percentage of students mastering each objective, and the percentage of objectives mastered.

Following this second assessment in the 1979-80 school year, the State Department of Education, acting on behalf of the State Board of Education, will prepare a report on the findings of the pilot assessment program. This report will be submitted by the State Board to the legislature in compliance with HB3115.

Provisions for Special Populations

Pupils determined to be exceptional under the provisions of Article 9 of Chapter 72 of Kansas Statutes Annotated are exempted from the provisions of HB3115; in other words, these students are not required to participate in the pilot assessment program.

Use and Implications of Test Results

Consequences to students. Results of the 1978-79 assessment will be reported only in group summary form to all local districts. Hence, individual student performance cannot be tied to promotion or graduation. Although the performance of individual students in the 1979-80 assessment will be reported to local districts, the provisions of the legislation clearly state that the data collected are intended for use by the legislature, which will determine whether students are demonstrating satisfactory levels of competence in reading and mathematics and consider the possibility of implementing a system of competency-based education. No guidelines for the use of assessment results at the local level have been issued by the State Board of Education.

Consequences to programs. No consequences to programs stemming from the pilot assessment program are either mandated or anticipated.

Program Resources and Costs

General program staffing. Two members of the State Department of Education working in conjunction with the Criterion-referenced Test Steering Committee developed the draft of objectives. The 26-member Committee is composed of teachers, administrators, and representatives from the lay community, nominated from across the State by local school districts and professional educational associations. This Committee will remain in existence throughout the second phase of testing. In addition, two Objectives-Review Committees, for the areas of mathematics and reading, will refine the objectives based upon the results of Phase I. The Objectives-Review committee members include members of the Steering Committee and curriculum specialists.

Approximate costs. The legislature appropriated $60,000 for the limited pilot program of 1978-79 and $190,000 for the full assessment in 1979-80. The funds cover test development, administration, evaluation, and all other aspects of the program.

Local districts are not expected to bear expenses other than the costs of the professional time required of their staff members who serve as members of the Criterion-referenced Test Steering Committee or as test administrators.

Funding sources. The monies appropriated by the legislature in enacting Senate Substitute for HB3115 constitute the sole source of funding for the pilot assessment program.

Program Evaluation

The State Board of Education has the responsibility for evaluating the pilot assessment program at the close of the second phase in 1980. No formal evaluation criteria have been determined to date. The findings of this evaluation will be submitted to the legislature as required under Senate Substitute for HB3115.

Future Directions

Upon receipt of the report prepared by the State Board of Education, the Kansas Legislature will decide whether or not student proficiency in mathematics and reading is satisfactory, and whether or not to implement a system of competency-based education. No guidelines for making this decision have as yet been prepared.

References

Kansas State Legislature. Senate Substitute for House Bill No. 3115. 1978.

State Board of Education. Kansas Competency Based Education: Statewide (Pilot) Assessment Program. Topeka: Kansas State Department of Education, 1978.

State Board of Education. "Memorandum issued by Merle Button, Commissioner of Education, the development of objectives for the Kansas Competency Board Education Pilot Program." Topeka: Kansas State Department of Education, 1979.

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COLUMBUS, KANSAS

While there is no State mandate in Kansas for minimum competency testing, there is an ongoing statewide pilot assessment program. This program is designed to provide the State legislature with information to be used in deciding whether to implement a competency-based educational system (see NES, Minimum Competency Testing in the State of Kansas).

In addition to this, the Columbus School District (Unified School District 493) has implemented its own Basic Skills Testing (BST) program. Initiated in the fall of 1976, this program is aimed at measuring students' mastery of basic skills through tests administered in each of grades K-8 and also in grade 12.

District personnel are responsible for the development, review, administration, and scoring of the tests, as well as the preparation and dissemination of results. The project is funded entirely by the District.

Legislative and Policy History

Policy history. The Basic Skills Testing program in Columbus, Kansas, originated independently of any mandate issued at the State level. It was initiated in 1976, primarily through the interests and efforts of two administrators in Unified School District (USD) 493. Several factors led to the creation of the minimum competency test: (1) interest among teachers in the District in revising curricula in many subject areas; (2) a general feeling among teachers and administrators that promotion was too automatic for many students; (3) many students leaving elementary school and entering secondary school were poorly prepared; and (4) the fact that no means existed by which student mastery of key concepts could be checked on an individual basis at different points throughout a student's school career.

Minimum competency testing began with the establishment of seven major curriculum revision committees, which involved between 95 and 107 teachers (most of the teachers in the District), and some administrators who were assigned to each committee. Teachers at all grade levels were asked to identify those language arts and mathematics skills and concepts that all students should know at the beginning of each school year and at the end of the same school year. Comparisons among teachers and among grade levels were made in order to establish a unified set of minimum competencies that students should master in each grade from kindergarten to grade 8 and also grade 12.

Three other committees were formed to facilitate smooth operation of the testing program. The first is a retention committee consisting of teachers, administrators, and parents who develop and maintain promotion and retention policies. The second is an oversight committee consisting of the District superintendent, a representative of the school board, and a school psychologist who is not employed by the District. "If the recommendations of building principal and teacher(s) are contrary to test results, the principal and teacher(s) are required to appear before and present justification for their recommendations to the oversight committee. The oversight committee will make the final decision for promotion or retention" (USD 493 ,1978, p. 2). The third committee is a review committee which meets once yearly to assess the entire minimum competency testing program. It consists of one representative for each of grades K-6; one mathematics and one reading representative for grades 7, 8, and 12; a representative of the school board; and two parents.

Phase of implementation. Field-testing of the Basic Skills Tests began in the fall of 1976 and actual implementation of the K-8 tests commenced in the spring of 1977; the first administration of the grade 12 test was in 1978-79. Three years of testing in grades K-8 and one year of testing in grade 12 have been completed. Tests in the elementary grades are currently administered twice a year, in January and in May; the grade 12 test was administered three times during the 1978-79 school year but in the future is to be administered twice each year to juniors and/or seniors.

Goals and Purposes

General goals. The main goal of the program is to make certain that students master a basic core of mathematics and language arts/reading competencies. Secondary goals include demonstrating to parents the extent of student mastery of materials developed by the Unified School District and demonstration, by students at the secondary level, of functional literacy as defined by the competencies of this program.

Specific purposes. Specific purposes of this program include: promotion, graduation, diagnosis of student learning difficulties, program evaluation aimed at restructuring teaching techniques and curriculum, and ensuring that students master goals and skills necessary for completion of one school year and entrance into the next.

Competencies

The Basic Skills Testing program focuses on the academic areas of mathematics and language arts/reading. A set of over 40 elementary competencies in reading and language arts has been established and compiled into a topic outline. Mathematics for elementary grades consists of 80 competencies also compiled in the form of a topic outline. Each competency has been assigned to one or more grade levels; a pool of 10-30 test items has been developed for each competency at each grade level. In grades 7 and 8, there are nine reading competencies and a series of mathematics objectives arranged in four major groupings.

Development of competencies was largely the result of a desire among teachers to revise curriculum guides. All teachers were given release time to organize and attend grade-level meetings to determine basic skills at each grade level. Competencies and test items were developed by teachers.

Validation of the competencies and test items occurred through field-testing. Field tests were given at, above, and below the specific grade level for which material had been developed in order to determine where a particular competency best fits into the program. Table 1 is a list of elementary competencies and the grade level(s) at which they are tested; Table 2 displays the reading and mathematics objectives for grades 7 and 8.

Standards and Standard Setting

Standards were initially set through recommendations of teachers, administrators, lay people, and school board members. Their final decision was to require a combined 80% mastery of reading and mathematics at any grade level.

TABLE 1

Elementary Competencies in Reading/Language Arts and Mathematics in Columbus, Kansas

	COMPETENCY	GRADE LEVEL						
		K	1	2	3	4	5	6
	Reading/Language Arts							
1.	Letter recognition	X						
2.	Color recognition (4 primary)	X						
3.	Writing upper and lower case alphabet	X						
4.	Rhyming words (using pictures)	X						
5.	Matching pictures	X						
6.	Initial consonant sounds (pictures)	X						
7.	Recognition of 4 basic shapes (circle, square, triangle, rectangle)	X						
8.	Left to right	X						
9.	Initial consonant sounds (pictures)		X					
10.	Ending consonant sounds (pictures)		X					
11.	Word recognition (1 of 4 choices)		X	X	X			
12.	Auditory recognition of long vowel sounds		X	X				
13.	Auditory recognition of short vowel sounds		X	X				
14.	Comprehension of visual story		X					
15.	Comprehension of written story (main idea, information, inference)		X					
16.	Consonant blends--2 letters			X				
17.	Suffixes (-s, -es, -ed, -ing, -y)			X				
18.	Contractions			X	X			
19.	Dividing words into two syllables			X	X			
20.	Comprehension (main idea, information, word endings)			X				
21.	Alphabetizing--first letter, list of 3			X	X			
22.	Singular and plural verbs (-s, -es, -ies)			X				
23.	Usage of long vowels				X			
24.	Usage of short vowels				X			
25.	Recognition of silent letters				X			
26.	Homonyms				X			

TABLE 1 (continued)

COMPETENCY	K	1	2	3	4	5	6
Reading/Language Arts (continued)							
27. Prefixes				X			
28. Suffixes (-ly, -er)				X			
29. Comprehension of a written story				X	X		
a. Main idea				X	X	X	
b. General information				X	X	X	X
c. Inference				X	X	X	X
d. Word meanings				X	X	X	X
30. Alphabetizing--first letter, list of 5					X		
31. Use of encyclopedias					X		
32. Word usage in sentences					X		
33. Word meaning in sentences					X		
34. Alphabetizing by first letter, list of 8						X	
35. Understanding of dictionary						X	X
36. Understanding of table of contents						X	X
37. Understanding of encyclopedia						X	X
38. Alphabetizing--first 3 letters							X
39. Synonyms							X
40. Antonyms							X
41. Understanding of atlas							X
Mathematics							
1. Numeration (1-10 writing)	X						
2. Numeration (1-10 recognition)	X						
3. Matching numbers with correct visual (1-10)	X						
4. Numeration 1-100		X	X				
5. Recognition of addition sign		X					
6. Recognition of subtraction sign		X					
7. 1 more than a given numeral		X					
8. 1 less than a given numeral		X					
9. Greater than or less than 1-100		X					

TABLE 1 (continued)

COMPETENCY	GRADE LEVEL						
	K	1	2	3	4	5	6
Mathematics (continued)							
10. Addition of 2 one-place numerals 1-10 (vertical and horizontal)		X	X				
11. Addition of 3 one-place numerals 1-10 (vertical)		X	X				
12. Subtraction of one-place numberals 1-10 (vertical and horizontal)		X					
13. Word names for numerals 1-100			X				
14. Place value--ones			X	X			
15. Place value--tens			X	X	X		
16. Recognition of cent sign			X				
17. Counting by 5s			X	X			
18. Abilities to use pennies			X	X			
19. Abilties to use nickels			X	X			
20. Abilities to use dimes			X	X			
21. Counting by 2s			X				
22. Counting by 10s			X				
23. Addition of two-place numerals (no regrouping)			X		X		
24. Subtraction of two-place numerals (no borrowing)			X		X	X	
25. Addition of 2 three-place numerals (with regrouping)				X		X	
26. Addition of 3 two-place numerals (with regrouping)				X	X		
27. Subtraction of two-place numerals (with borrowing)				X	X	X	
28. Subtraction of three-place numerals (with borrowing)				X	X	X	X
29. Multiplication--0-5				X			
30. Word names for numerals 1-1000				X			
31. Place value--hundreds				X	X		
32. Recognition of multiplication sign				X			
33. Recognition of dollar sign				X			
34. Ability to use quarters				X			

TABLE 1 (continued)

	COMPETENCY	GRADE LEVEL						
		K	1	2	3	4	5	6
	Mathematics (continued)							
35.	Ability to use dollars				X			
36.	Counting by 3s				X			
37.	Counting by 4s				X			
38.	Time to the hour				X			
39.	Time to the half-hour				X			
40.	Understanding of fraction ½				X		X	
41.	Understanding of fraction ¼				X		X	
42.	Understanding of ruler ½				X		X	
43.	Understanding of ruler ¼				X		X	
44.	Number sequencing 1-1000				X			
45.	Greater or less than 1-1000				X			
46.	Story problems				X	X	X	X
47.	Addition of two-place numerals (with regrouping)					X		
48.	Addition of three-place numerals (with regrouping)					X	X	X
49.	Addition of 2 four-place numerals (with regrouping)					X		
50.	Subtraction of three-place numerals (no borrowing)					X		
51.	Multiplication with multiplier 0-10					X	X	
52.	Division with divisor 1-10 (no remainder)					X	X	
53.	Understanding of fraction 1/3					X		
54.	Place value--thousands					X	X	X
55.	Place value--millions					X	X	X
56.	Addition of 4 one-place numerals						X	
57.	Addition of 2 five-place numerals (with regrouping)						X	
58.	Addition of mixed whole numerals						X	X
59.	Subtraction of mixed whole numerals						X	X
60.	Multiplying with multiplier 0-99						X	X
61.	Division with divisor 1-10 (remainder)						X	X
62.	Division with divisor 1-99 (remainder)						X	X
63.	Reducing fractions to lowest terms						X	X

TABLE 1 (continued)

COMPETENCY	GRADE LEVEL K	1	2	3	4	5	6
Mathematics (continued)							
64. Adding of fractions with common denominators						X	
65. Adding of mixed fractions with common denominators						X	
66. Subtraction of fractions with common denominators						X	X
67. Subtraction of mixed fractions (no borrowing)							X
68. Adding of 3 four-place numerals							X
69. Subtraction of four-place numerals (with borrowing)							X
70. Multiplying with multiplier 0-999							X
71. Place value--billions							X
72. Adding fractions--unlike denominators							X
73. Multiplying proper fractions							X
74. Dividing proper fractions							X
75. Changing mixed numerals to improper fractions							X
76. Changing improper fractions to mixed numerals							X
77. Addition of one-place decimals							X
78. Subtraction of one-place decimals							X
79. Multiplication of one-place decimals							X
80. Division of one-place decimals							X

TABLE 2

Grade 7/8 Competencies in Reading and Mathematics in Columbus, Kansas

Reading

1. Determine meaning of isolated words without context clues.
2. Be able to use homonyms within a sentence structure.
3. Be able to determine the main idea of a story.
4. Be able to determine meaning of selected vocabulary words when presented in sentences.
5. Be able to make inferences from reading short stories.
5. Be able to read and follow written directions.
7. Be able to read material for specific answer(s).
8. Be able to use an index.
9. Be able to alphabetize up to ten words to the fourth letter of the alphabet.

Mathematics

I. Whole Number Properties and Operations
    A. Recognizing a numerical value that is written in word form and rewriting it using numbers.
    B. Displaying reasonable proficiency in the four basic operations.
        1. Adding a list of numbers written horizontally.

TABLE 2 (continued)

Mathematics (continued)

    2. Subtracting a three-digit number from another three-digit number.
    3. Multiplying a three-digit number by a two-digit number.
    4. Dividing a four-digit number by a one-digit number.

C. Understanding some of the basic properties governing whole numbers.

    1. Rounding a whole number to the nearest ten or hundred.
    2. Finding a multiple of a one-digit number.
    3. Recognizing some special properties of 0 or 1.
    4. Checking a two-digit number for divisibility by a one digit number.
    5. Knowing the place value of each digit of a three-digit number.
    6. Completing number sentences.

II. Fractions, Decimals, and Percents

A. Basic understanding of fraction operations and the relation of fractions to decimals, percents and other fractions.

    1. Elementary understanding of addition of fractions. This includes addition of fractions with unlike denominators.
    2. Elementary understanding of multiplication of fractions. This does not include cancellation.
    3. Reducing fractions to simplest terms.

TABLE 2 (continued)

Mathematics (continued)

4. Recognizing an improper fraction.

5. Finding the largest or smallest fraction out of a list of several fractions. Fractions will be devised so that all have the same numerator.

6. Finding a fractional part of a whole number.

7. Changing a fraction to a decimal.

8. Changing a fraction to a percent.

B. Understanding decimal operations and relations. (A strong link is made with parallel questions to the U.S. monetary system.)

1. Understanding addition and subtraction problems.

2. Multiplying two two-digit decimal numbers.

3. Rounding a decimal number to the nearest thousandth.

4. Finding the largest or smallest decimal value out of a list of several decimal numbers.

C. Understanding how to work with percents.

1. Finding a percent of a whole number.

2. Estimating the shaded portion of a bar graph in percent.

III. Geometry and Measurement

A. Measurement objectives:

1. Reading a ruler with ¼ inch subdivisions.

TABLE 2 (continued)

Mathematics (continued)

2. Finding the largest or smallest measurement of distance, volume, or weight out of a list of several possible choices.

3. Computing arrival time or departure time when travel time and departure time or arrival time are known.

B. Geometric objectives:

1. Recognizing basic geometric shapes; circle, square, triangle, rectangle, etc.

IV. Mathematics Application.

A. Working real life problems given in the form of word problems.

1. Problems shall involve not more than three mathematical operations to complete.

2. Consumer-related problems involving receiving change or computing price.

3. Reading and following a simple formula.

4. Home and farm related questions.

5. Reading a graph.

a. Finding one piece of information on a graph.

b. Comparing two pieces of information found in the graph.

The mastery level was refined in 1978 as a result of previous testing. In grades K-6, students who have attained 90% or more on the math and/or the language arts/reading tests administered in January will not be required to take the respective test(s) in May, except through teacher referral. In grades 7 and 8, students obtaining a composite score of 80% or more on both tests administered in January will not be required to take either test in May, except through teacher referral. A composite score of 80% is also the passing standard on the grade 12 reading and mathematics tests.

Target Groups and Testing Schedule

The target groups are grades K-8 and grade 12. All students in those grades except those with special needs are included in the testing. Tests are administered once in January and once in May as previously described; the grade 12 test is administered to juniors and/or seniors twice during the year. The rationale for the testing schedule is that it allows teachers time to concentrate on particular competencies not mastered prior to the final test in May.

Test Instruments

Basic Skills Testing program tests for grades K-8 are divided into four test forms: A, B, C, and D. Forms A and B are administered in January and forms C and D in May. Each form comprises an average of 50 open-ended and multiple-choice items sequenced (blueprinted) by the director of the program. Items are drawn from the pool, with at least one item per competency (of the respective grade level) included. The director's eventual goal is to revise the tests each year so that no student encounters the same items more than once.

There are also four parallel forms of the grade 12 test, each with approximately 60 mathematics items and 73 English items.

All test items used have been field-tested and revised by teachers and administrators in the District.

No answer sheets are used: students record their responses directly in the test booklets.

Test Administration

All students are tested on the same days; each subtest is administered on a separate day with one day skipped between administrations.

Elementary teachers administer tests to classes other than their own; counselors administer high school tests. Administration is not timed and students may take as long as they wish, but testing sessions generally last about one hour. Students who are absent during testing are given makeup tests by school administrators.

Student participation in the testing program has been made mandatory by the school board so parental permission is not necessary.

Scoring and Analysis

Test for grades K-5 are hand-scored by the Director of Testing and his secretary. The secondary level tests are hand-scored by the heads of the English and Mathematics Departments. Information produced consists of thefollowing: a raw score for each of the math and reading/language arts tests; percent correct for each test; a composite score; and a composite percentage. Group statistics are produced by grade level, with turnaround time for reporting approximately two weeks. The District has the resources to accomplish scoring and analysis; anything beyond present reporting would require computer resources to which they lack access.

Reporting/Dissemination

Test results are reported by the program director mainly for teachers, to facilitate improvement of instruction of material covered by the tests. Parents receive their child's percentage correct and a comparison of performance in relation to other students, as well as grade-level averages which are also released to the local newspapers. The data become part of the student's permanent record.

Provisions for Special Populations

Special needs students and those enrolled in Special Services may be exempted from the testing requirements at the discretion of the building principal and teacher(s). Special Services students are defined as those students "who have been diagnosed and placed in a program for the mentally handicapped (EMH, TMH), learning disabled, hearing impaired, visually impaired, and multiple handicapped" (USD 493, 1978, p. 2).

Use and Implications of Test Results

Consequences to students. The retention policy built into the Basic Skills Testing program has meant that students in grades K-8 have been susceptible to retention based on test scores and teacher recommendation. Over 20 such cases have occurred. The retention policy has been most effective for grades K-3, but is used at all levels.

Juniors and seniors who do not pass the grade 12 test have several options open to them for meeting the high school requirement. They may choose to take a communication skills class offered by the Vocational Technical School for which they may get high school English credit; they may elect to take basic skill instruction in English and mathematics; they may elect to make a schedule change in order to take a class with emphasis in their problem area. Individual teachers and counselors also offer informal tutoring to high school students having trouble passing the test.

Consequences to programs. The Basic Skills Testing program's retention policy has given rise to a ground swell of teacher and parent demand for remedial programs. The curriculum and program revision through which basic skills testing originated is ongoing and it is expected that competencies will be revised in the future. In-service programs on methods of teaching some of the more difficult competencies (determined by student performance) are provided for teachers.

Program Resources and Costs

General program staffing. Staffing of the Basic Skills Testing program for grades K-8 consists of the Director of Testing (who is also the elementary school principal) and a secretary; for grade 12, a high school counselor serves as coordinator. These staff members run the entire program, prepare tests, duplicate tests yearly, and conduct or supervise scoring. New staff have been added to expand remedial reading and math programs, and new services for learning disabled students in high school have been developed as a result of this program.

Costs. Start-up costs were reported as being negligible since they consisted of slight amounts of released time for teachers; the procurement of a new copier, collator, typewriter, and paper for copying tests; and the hiring of an additional secretary. There have been no hidden or unanticipated costs. Title I funds are being used for some of the remediation programs based on test results.

Program Evaluation

The only defined evaluation procedure is a yearly review of the program by a committee of teachers, parents, and school board representatives. To date, no formal evaluation criteria have been set, nor is a program evaluation report produced.

Future Directions

Future program plans include an expansion of basic skills in math and reading for grades K-12; the eventual addition of life skills at the secondary level; and the addition of other school subjects to the basic skills material.

The District is interested in determining what variables in the basic skills testing are related to the rise in scores on standardized tests (ITBS) given in the District. The District would also like to do follow-up studies on students who are tracked into special remedial programs and how and when they are mainstreamed back into regular programs. Another area of interest for a possible follow-up study is how teaching strategies change for different competencies among different teachers depending on test results and in-service training.

References

Kansas, State Legislature. Senate Substitute for House Bill No. 3115. 1978.

Kansas, USD 493. Basic Survival Skills Retention Policy. Columbus, Kansas ,1978.

National Evaluation Systems. Minimum Competency Testing in the State of Kansas. 1979.

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KENTUCKY

Kentucky's Educational Improvement Act (HB579) was mandated in March, 1978. It is composed of two distinct parts: (1) measurement of student progress and achievement in basic skills, and (2) the development of district Educational Improvement Plans (EIPs) outlining remedial programs or activities. The main purpose of HB579 is to ensure that each student will acquire basic skills in the mandated areas--reading, writing, mathematics, and reference skills--and that each student will be involved in programs appropriate to his/her needs. Each student in grades 3, 5, 7, and 10 will take a screening test in the spring of the school year and those who test below criteria will take a diagnostic test in the fall of the following year to assess specific needs and the advisability of placement in the local Educational Improvement Plan (EIP). Responsibilities for implementing the program are balanced between State and local agencies. The Office of Research and Planning and the Bureau of Instruction provide test instruments and scoring as well as support and information during all phases of implementation. Local agencies administer tests and develop, implement, and review local EIPs. The first EIPs for grades 4, 6, 7, and 11 will be implemented by the 1979-80 school year and EIPs for grades 5, 7, 9, and 12 are to be implemented by the 1980-81 school year. The programs will be continuous thereafter and will be reviewed and updated annually by the local districts.

Legislative and Policy History

In December of 1976, the Kentucky State Board of Education instructed the Department of Education to conduct a study of competency-based education and minimum competency testing for high school graduation and grade promotion. The impetus behind this directive might be attributed in part to the national emphasis on basic skills and the trend toward competency testing; it should also be noted that for the last 10-15 years, the State has offered an optional basic testing program in which 151 of the 181 districts have regularly participated. While test scores around the nation have steadily declined, there has been a slight improvement in Kentucky scores. The improvement has been attributed to a consistent emphasis on basic skills over the years and to more recent changes within the state, including the successful implementation of Title I programs, increased expenditures for education, improved family incomes and low unemployment rates, increased emphasis on the content of education as it relates to the needs of students, increased emphasis on staff development, and effective utilization of test scores. The Governor of Kentucky has given education the highest priority in the State.

As a result of the Board of Education instruction, the Department of Education conducted a study of competency-based education and minimum competency testing. Subsequently the Department offered a four-year plan, approved by the Board in the spring of 1977, which called for the development of criterion-referenced tests in reading, mathematics, and writing for grades 3, 4, 8, and 11. At the same time, the Governor appointed statewide Task Forces (with a total of 360 members, including a Steering Committee of 40) to make recommendations about competency testing by the fall of 1977. In October 1977 the Task Forces recommended to the Board a competency testing program for high school graduation.

All Board action was superseded in March 1978 by the enactment of the Kentucky Educational Improvement Act (HB579). According to the Department, State legislators felt that it was important to move ahead more quickly than the Board's four-year plan had allowed and that appropriate funding to support educational improvement would be more likely if a law was enacted.

HB579, therefore enacted a two-part program of assessment and improvement. First, a statewide assessment in grades 3, 5, 7, and 10 will identify students in need of remediation. The bill gives the Department of Education explicit responsibility for selecting and administrating "tests appropriate to the Commonwealth of Kentucky for measuring student progress and achievement on the basic skills" (HB579). The Department must also score the tests and compile results, thus identifying those students who may need remedial attention. Then, with the return of these results from the Department, local districts must develop and implement EIPs that will further diagnose the weaknesses of the identified students and provide them with appropriate remediation.

With respect to the EIPs, HB579 specifically mandates responsibility to local districts to include on their plans: process and product goals for educational improvement; specific objectives and activities aimed at alleviating the identified learning problems; priorities and a timeline for implementation; and a list of those involved in the plan's development.

It is important to note that HB579 makes no mention of using minimum competency testing for either grade promotion of graduation. Rather, it is the intent of the law to:

(1) assure the right of each student to acquire basic knowledge and learning skills;

(2) assure each student access to appropriate programs and services.

The task forces, appointed in 1977, were retained at the direction of the State superintendent in order to continue the development of criterion-referenced tests for the grade levels mandated by law--grades 3, 5, 7, and 10. While this effort is currently separate from the mandated assessment and improvement program, the Department hopes to substitute these tests, when developed, for those being used in the statewide assessment.

Phase of implementation. The original implementation schedule in HB579 required each local district to begin testing and developing EIPs in the 1978-79 school year. The original schedule allowed for a one-year planning period followed by pilot programs and then a one-year implementation period. This schedule was subsequently compressed to expedite the implementation of EIPs. During the 1978-79 school year, therefore, the Department conducted pilot programs in volunteer districts. The first administration statewide of the screening tests in reading, writing, mathematics, and reference skills was in April 1979 to students in grades 3, 5, 7, and 10. All students in grades 4, 6, 8, and 11 who were below criteria in the spring will take the first diagnostic tests in the fall of 1979. The first EIP is due from each district to the Kentucky Department of Education by October 1, 1979.

Goals and Purposes

General goals. The underlying purpose of Kentucky's Educational Improvement Act is stated directly in HB579: "It is the intention of the general assembly in enacting this legislation to assure the right of each student in the public schools of this state to acquire the basic knowledge and learning skills essential for completing high school, pursuing a course of study in postsecondary education, or entering the work force in our society. It is further the intention of the general assembly to assure each student in the public schools access to those programs and services appropriate to his educational needs in the areas of basic academic and learning skills development" (HB579, 1978).

Specific Purposes. The specific purposes of the legislation include: (1) the measurement of student achievement and progress in basic skills, with results to be used for identifying broad areas of student weakness; (2) the diagnosis of student learning problems, (3) development of district EIPs outlining remedial programs and activities that are designed to meet the identified student needs. The legislation does *not*, however, make either student promotion or graduation contingent upon passing the tests.

The local boards are required to conduct public hearings to set educational improvement goals. Students with identified weaknesses in basic skill areas will have access to the local district programs specifically designed to meet their needs.

HB579 (section 6 (4)) states that the test results acquired through screening and diagnostic tests are to be used only to aid the student and not as an evaluation of teachers or administrators for the purpose of promotion, demotion, transfer, or dismissal.

Competencies

While the Department does not use the term "competencies" in published documents, the skills assessed are those measured by California Test of Basic Skills originally selected as a testing instrument in 1969. A Regional Committee of teachers and administrators from every part of the State had originally convened for the purpose of developing an achievement test for Kentucky. This group contracted with EPIC Diversified Systems of Arizona (which no longer exists under that name), but decided after several meetings not to pursue this course. After a review of commercial tests to determine which would best measure Kentucky curricula, the Committee then recommended the CTBS-McGraw Hill, which was subsequently approved and has been used throughout the State ever since. The Department conducts annual reviews of the tests to ensure continued appropriateness for Kentucky; to date, the test is still satisfactory.

Since the passage of HB579, the CTBS has been the screening instrument which determines broad subject areas or skill groups to be emphasized in each district's EIP. The competency areas mandated are basic academic skills--reading, writing, mathematics, and reference skills. Table 1 presents the expected student outcomes for the Kentucky Educational Improvement Act. The State Board approved these in 1978 as the skills the CTBS is expected to measure.

TABLE 1

Expected Student Outcomes for the Kentucky Educational Improvement Act of 1978

Reading

Increase basic reading vocabulary skills.
Increase basic reading comprehension skills.

Writing

Improve spelling skills.
Improve knowledge of language mechanics skills.
Improve utilization of effective language expression skills.

Mathematics

Improve skills in mathematics computation.
Increase knowledge of mathematics concepts and applications.

Reference Skills

Increase ability to utilize reference skills.

Standards and Standard Setting

HB579 neither sets standards of competency in basic skills that must be achieved by Kentucky students nor directs the State or local districts to set such standards. The only procedure that approaches standard setting is that developed by the Department for identifying students, on the basis of the screening test results, who are eligible for further diagnostic testing and participation in local improvement activities. The Department determined "acceptable levels of achievement" in the following way:

(1) They selected voluntary school districts for whom 1977-78 CTBS test results were available.

(2) They asked teachers in these districts to classify their students into three separate groups: those who *do need* remedial instruction, those who *may need* remedial instruction, and those who *do not need* remedial instruction.

(3) They plotted the results of those students who *do* and who *may* need remediation, utilizing expanded standard scale scores.

(4) They specified the acceptable level of achievement as the point of intersection of those two plots.

On the basis of statistical measure of the acceptable level of achievement the Department has indicated that "approximately 15-22% of Kentucky students in each of the grades tested will be identified as needing further diagnostic assessment in order to determine the extent of possible remediation" (SDE, 1978, p. 83). No standards are set on the diagnostic instruments since these test results are used to profile student achievement--strengths and weaknesses.

Target Groups and Testing Schedule

There are two testing periods each year. In the spring, during a designated three week period in April, a screening test--currently the CTBS/S--is given to all students in grades 3, 5, 7, and 10. Makeup tests are provided to ensure the participation of the greatest number of students. The screening test is used to identify students most in need of remediation.

The second testing period, which will begin in the fall of 1979, tests only those individuals in grades 4, 6, 8, and 11 identified by the screening instrument as being most in need of assistance. The purpose of the diagnostic tests is to identify students who will be eligible for participation in the local EIP and to determine the specific areas in which each student needs support. Selection of students who actually participate in remedial activities is then based both on test results and teachers' judgments.

Test Instruments

In the past, local districts had the option of administering the CTBS and receiving scoring services free of charge from the Department. This year all districts must administer the CTBS/S, which the Department purchased on the authority given it by HB579, and the Department continues to pay all costs for purchase and scoring. The CTBS/S is used as a *screening* test to measure those skills defined as basic in HB579. It is used, in other words, to identify the lowest achieving students who may need remedial instruction.

In 1978-79, a Committee of the Department of Education, made up of three members from the Governor's Task Force and two from the Superintendent's Test Advisory Group, invited six companies to submit tests for consideration as the *diagnostic* instrument. The committee recommended, and the Board approved, the Prescriptive Reading Inventory and the Diagnostic Math Inventory, both from McGraw Hill. The State has had satisfactory experiences with these instruments in Title III projects, and they are said to be relevant in content to the CTBS and to the instructional materials being used in Kentucky. In the fall of 1979, then, local districts will have the opportunity either to utilize the State diagnostic test service or choose an appropriate alternative form of diagnostic assessment. If a local district decides to select an alternative test instrument, the choice must be approved by the State, and the local district will be responsible for expenses.

Test Administration

The Department has delegated to the local districts the responsibility for administering all tests, for handling irregularities of data collection, and for packaging and returning materials to the State.

The Office of Research and Planning in the Department of Education offers technical assistance in administration, utilization, and interpretation of testing material. These include an implementation manual and technical consultants.

Tests are administered by classroom teachers who have been prepared for the testing procedure by in-service programs, information in the Implementation Manual, and/or memorandums outlining test security and inventory. The teachers are also responsible for noting any irregularities involving students (illness, extreme distress with testing situation, physical handicaps, etc.) or irregularities which might influence the testing environment (interruptions, noise). A student's test is considered invalid if illness or some other interruption causes the student to lose time within a test unit. In such a case, no score will be reported for the test, the skills area, or the total battery. A makeup period is available.

Responsibility for coordinating local testing activities with the Department of Education lies with the local EIP Coordinator and the Test Coordinator, who is usually a part of local school guidance staff. In some districts, the EIP Coordinator and Test Coordinator are the same person.

Scoring and Analysis

While the local districts are responsible for all test administration, the Department of Education, as stated in HB579, has the responsibility and expense of scoring all CTBS screening tests. The diagnostic tests given this year were scored by the publisher, but Kentucky "has bought the rights" to scoring in future years. In the future, therefore, the Department will provide scoring services on both the screening and diagnostic tests. If local districts elect to administer an alternate diagnostic instrument, however, they must bear the costs and arrange for scoring.

On both the CTBS and diagnostic tests, scores will be generated for each student in the form of percentiles, standard scale scores, stanines, and grade equivalent scores.

Reporting/Dissemination

Group data on both tests will be reported to local districts by grade level for each class, school, and district. The Department will also send to the local districts reports of frequency distributions and item/concept analyses by classroom, school, and district. The Department will generate a separate listing of students scoring below the specified mastery level on the CTBS, to be sent to local school superintendents.

Grade equivalent scores will not be reported if the district so requests, but according to the Department, approximately 80% of the districts do wish to have grade equivalent reported.

Summary reports of the screening test data are made available by the Department to the Governor, the State Advisory Committee for Educational Improvement, the State Board for Elementary and Secondary Education, and local boards of education.

Use and Implication of Test Results

Consequences to students. The purpose of determining skill levels through testing is to assess the needs of individual students. It is mandated that those students who do not meet "acceptable levels of performance" on the CTBS become eligible for local EIPs. Results of the diagnostic tests will help to pinpoint specific student learning problems. There is no statewide test requirement for graduation. Remediation plans exist at the local level; enrichment plans are hoped for by the Department.

Consequences to programs. Local districts are responsible for developing district EIPs. The Department then reviews and approves these plans according to guidelines set out the State Board of Elementary and Secondary Education. Since programs are to be locally reviewed and updated on a yearly basis, the Department hopes that substantive program development will evolve.

Provisions for Special Populations

Students who receive services solely through self-contained special education classes have Individual Education Programs (IEPs) and are therefore not required to participate in further testing. A special education teacher, after reviewing a student's IEP, may recommend that the student take the CTBS at a level other than that administered to his/her peers. Results for exceptional students who take any form of the CTBS/S will be handled separately from those of all other students.

Those students who have been mainstreamed take the test with their nonhandicapped peers; again, their tests are handled separately and not included in any norming procedures.

Program Resources and Costs

General program staffing. The Bureau of Instruction, which assists the local districts in their development of EIPs, and the Office of Research and Planning, which is the focus of all testing activities, function as educational resources by providing workshops for superintendents, principals, EIP coordinators, and university personnel. In their assistance to local districts, these two agencies use a team approach to all phases of implementation. There are 17 people from each agency who devote approximately 75% of their time to implementing the Educational Improvement Act. Two recently hired staff members in the Department of Education devote their full time to the new HB579 programs.

Committee support for the program continues to function in the form of a mandated Task Force, appointed by the Governor, and the ongoing Test Advisory Group in the Department of Education. The Task Force mandated by HB579 is to be composed of citizens, parents, teachers, and administrators, who serve from one to four years.

Approximate costs. For fiscal year 1978-79, $478,000 was budgeted for testing, workshops, scoring, and purchase of tests. Staff members (but no other salaries) come from these funds.

For fiscal year 1978-80, $1.75 million will be budgeted at the State level for the Bureau of Instruction and the Office of Research and Planning. Both agencies will be working closely with local school districts to develop EIPs, to continue testing, to provide instructional services, and to offer consulting services. The State agencies will coordinate with Title I which, in turn, will provide monies directly to the local districts for remedial activities but has also requested additional funds from the legislature for these local implementation activities.

Funding sources. All funds at the State level are provided through State budget appropriations. Title I funds will be appropriated to local districts; the local districts must fund all items not covered by Title I or provided for by the State agencies. These include all costs for the use and scoring of alternative diagnostic tests, for test administration, and for implementation of local EIPs.

Program Evaluation

Evaluation of the program is implied, not mandated; a Subcommittee of the Governor's Task Force will initiate the process with a questionnaire to all local districts. This subcommittee intends to (1) evaluate each phase of the program--testing, diagnostic, and instructional--in terms of each district's attitudes and impressions, and (2) evaluate improvement at the local level by looking at student achievement gains on the test instruments according to product goals.

Future Directions

The Task Force established in 1977 continues to work toward development of Kentucky's own "criterion-referenced" tests, as first recommended in the feasibility study. These tests will assess reading, writing, mathematics, and reference skills in grades 3, 5, 7 and 10. A review of this development activity is slated to occur in January 1980, at which point the Department foresees a possible delay in the timeline for implementation of the tests. If implemented at all, the tests, which were to replace the CTBS, will probably be put into use within the next four years.

References

State Department of Education. Educational Improvement Implementation Manual. Kentucky: 1978.

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LOUISIANA

Minimum competency testing in Louisiana was initiated in 1976 as the result of legislation which established the principle of educational accountability in the Louisiana public school system. The legislation directs the Superintendent of Education and other officials and agencies to take the steps necessary to establish minimum proficiencies for Louisiana students, and to implement an assessment program to measure student achievement of these proficiencies by means of criterion-referenced tests. The law specifies three skill areas in which students are to be tested: reading, writing, and mathematics.

Students in grades 4, 8, and 11 were first tested in reading in 1977-78 and in mathematics in 1978-79. The writing assessment to be administered in the same grades will be in place in the 1979-80 school year. At present, test results are not tied to graduation requirements or grade promotion, but a functional literacy program is under development.

Legislative and Policy History

Policy history. In 1976, the Louisiana House passed HB810, Act 709, which required the establishment of reasonable minimum levels of pupil proficiency in the basic communication and computational skill areas, and the administration of a uniform system of criterion-referenced tests. The act reflected the general mood of the public at that time. Results of a Gallup poll, for example, indicated the public's concern over declining college entrance examination scores, a perceived lack of minimum skills obtained by students, and lack of preparation of graduates for the world of work.

After the passage of this act, the State Department of Education appointed a 100-person advisory committee to study the implementation process. The Committee made recommendations to the Joint Legislative Committee on Education which resulted in the drafting of Educational Accountability Act HB275, Act 621. The act became law in 1977, and states:

> The superintendent shall, by January 1, 1978 establish reasonable minimum levels of pupil proficiency in the basic communication and computational skills which shall be integrated into instructional programs. The superintendent shall, by January 1, 1979, develop and administer a uniform system of assessment based in part on criterion-referenced tests to determine pupil status, pupil progress, and the degree to which such minimum proficiency standards have been met. The grade levels involved in such assessment shall be chosen by the superintendent. The local school governing bodies shall cooperate with the superintendent and the State Department of Education in the administration of this section.

Neither AB810, Act 709 or HB275, Act 621 link promotion or graduation to student performance on the tests.

In March 1979, however, the Louisiana Board of Elementary and Secondary Education adopted a policy for a Literacy Assessment Program. Support for this policy came during the 1979 regular session of the State legislature when Act 750, Comprehensive Basic Education Act, was passed. The Louisiana Department of Education is in the process of planning implementation procedures. Actual implementation is not expected to take place in the near future.

Phase of implementation. Tests in reading were implemented in 1977-78; and tests in mathematics were implemented in 1978-79, both on schedule according to HB275, Act 621. Writing tests were field-tested during the 1978-79 school year, and will be fully implemented in 1979-80.

Goals and Purposes

General goals. The report of the Advisory Committee stated that the goals of Louisiana public education are to provide every child with the following:

(1) Reasonable mastery of the basic skills of reading, writing, and arithmetic.

(2) An understanding and appreciation for the arts, humanities, social, and natural sciences.

(3) An understanding of the talents and limitations of each individual; in other words, self-awareness.

(4) Understanding of and tolerance for other social, cultural, and ethnic groups.

(5) A positive attitude toward and respect for learning and the body of knowledge that constitutes human culture.

(6) Responsibility for and devotion to high principles of citizenship.

(7) Devotion to basic principles of good health practices.

(8) Commitment to the fostering of human creativity.

(9) A thorough acquaintance with the full range of vocational choices available when schooling is finished.

(10) A commitment to the principle of continuing education of a kind that goes on throughout adult life.

Specific purposes. The Educational Accountability Program is to:

(1) Establish and provide for the implementation of a procedure for the continuous identification, examination, and improvement of the goals of education in the state;

(2) Establish basic uniform statewide skills and concepts for each grade level and subject area, including, but not limited to, reading, writing, and mathematics;

(3) Identify performance objectives which will lead directly to the achievement of pupil proficiencies;

(4) Develop evaluation instruments including, but not limited to, tests to provide the evaluation required;

(5) Develop and implement an overall evaluation design to provide for continuous and comprehensive review of progress of pupils toward established goals and objectives, the evaluation to be conducted by teaching staff members of the school district under the direction of the chief school administrator of the district; and

(6) Provide for an annual report, by the chief school administrator of each district to the Superintendent of Education, of the results of the evaluation of the progress of pupils. (HB275, Act 621). It should be noted, however, that in actual practice, it is the State Department of Education which supplies the chief school administrator of each district with the results of the student evaluation.

Competencies

Act 621 grants broad powers to the State Department of Education to initiate and carry out the activities necessary to implement the minimum competency program. Competencies were selected by an Advisory Council appointed by the State Department of Education for each subject area. The Advisory Councils were responsible for the development of minimum standards in reading, mathematics, and writing. Each Advisory Council consisted of Louisiana educators from the public schools, universities, and colleges, and State Department of Education personnel. Competencies were selected through a review of the most frequently used text series and national standards (where available) to identify a list of skills common to all school districts throughout the State. The skill definitions were then revised, refined, and ranked on expected grade level mastery indicators.

Content validity was sought from two types of consensual judgments by teachers, content area specialists, and measurement specialists:

(1) A consensus as to the objectives involving demonstration of minimum skills deemed necessary and relevant to fourth-, eighth-, and eleventh-grade Louisiana student populations;

(2) a consensus on the adequacy of test items as measures of the skills which they were constructed to measure.

The broad skill areas defined and adopted for each competency area--reading, mathematics, and writing--are listed in Table 1.

A committee appointed by the State Department of Education has also developed life skills out of the competencies for grade 11 and for grade 8.

TABLE 1

Skill Areas Adopted in Louisiana for Reading, Mathematics and Writing

Reading

- Readiness
- Vocabulary
- Phonetic Analysis
- Structural Analysis
- Comprehension and Study Skills

Mathematics

- Computation
- Sets
- Numeration
- Whole Number Operations
- Fractions and Operations
- Decimals and Decimal Operations
- Percent
- Ratios and Proportions
- Squares and Square Roots
- Relations and Functions
- Measurement and Estimation
- Geometry
- Problem Solving

Writing

1) Types and Forms of Writing
    - Description
    - Narration
    - Exposition and Persuasion
2) Writing Skills
    - Handwriting
    - Spelling
    - Punctuation
    - Capitalization
    - Language Structure
    - Organization
    - Proofreading

Standards and Standard Setting

Standards in the sense of pass/fail cutoff scores have not been set in Louisiana's program. Rather, the competencies that were defined by the Advisory Councils represent what the Department considers to be the minimum or "core" skills in each subject area. Mastery of every competency objective is defined in performance terms, and the Department stresses that these objectives should be taught and mastered by the years indicated, and in the years succeeding assessment.

Since test scores are reported in terms of an average percent correct, data is used for informational purposes only. The department intends to examine assessment data within three years of the program's inception and make decisions about setting standards at that time.

Target Groups and Testing Schedule

Statewide reading and mathematics tests are administered every fall to students in grades 4, 8, and 11. Writing tests will be administered in the same grades during the 1979-80 school year.

Grade levels for testing were established by the Superintendent of Education in accordance with Act 621. The reasons behind the grade selection are that grade 4 marks the end of the primary grades, grade 8 marks the last year before high school credits are earned, and grade 11, while nearly at the end of high school, permits one year for remediation if it is needed.

Test Instruments

Louisiana criterion-referenced tests have been developed to assess the skills established for reading, mathematics, and writing by the Advisory Councils. The tests are entitled: The Louisiana Assessment of Reading, Mathematics, and Writing.

Intran Corporation of Minneapolis, Minnesota selected and reviewed test items and published the Louisiana tests. The contractor developed objectives on the basis of consultations and reviews with the State Department of Education and Advisory Council specialists about the nature of the population, the purposes of the objectives, and the types of skills or domains considered desirable. The Advisory Councils and specialists in the State Department of Education then chose the test objectives which measure minimum competency in reading and mathematics. Intran test item writers developed test items based on these specifications, and the Louisiana Advisory Councils reviewed them for relevance to the objectives and appropriateness for the various grade levels and student populations. After the incorporation of suggested revisions, the items were finally approved by the State Department of Education.

There are 20 objectives per subject area test, each measured by four multiple-choice items. The writing test, developed by National Testing Service (NTS), consists of an objective and an open-ended form. There is one test form per grade level and tests require 90 minutes per basic skill area for administration.

Test item tryouts for mathematics and reading were conducted on a 5% sample of all Louisiana students. A differently stratified 5% sample was used to try out the writing items. Committees established by the State Department of Education both reviewed the test items for sexual and racial bias and examined field test results for possible discrimination in favor of or against certain population subgroups. As of 1978-79, both the reading and mathematics tests were in place; the writing test is currently being revised on the basis of field test results and will be administered in the 1979-80 school year.

Test Administration

School administrators and counselors administer the tests at the secondary level; classroom teachers administer the tests at the elementary level. The State Department of Education assessment staff trained one person in each parish as a coordinator. The parish coordinator then trained one coordinator per school who in turn trained all the other teachers in the school to administer the tests. Parental permission is not necessary for the tests.

Tests are secure but the security procedures are not foolproof. However, since test results do not affect individual students, security does not seem to be a major concern. The contractor handles exception forms. Absenteeism is low, and there is no makeup testing.

Tests are given over a period of three days. One day is devoted to each subject area (reading, writing, mathematics). There is also a practice test for the fourth-graders on the first day of testing.

Scoring and Analysis

The 1977-78 reading test was scored by Westinghouse Learning Corporation. Both the reading and mathematics tests for 1978-79 were scored by Multi-Media Associates, under contract to the Department of Education. For the 1979-80 program, with the exception of the open-ended questions, writing objective items will also be scored by this contractor. In order to score the open-ended writing items, the Department, in cooperation with Louisiana Tech University, held a three-week summer workshop to train 35 Louisiana classroom teachers in National Testing Service scoring procedures.

Test scoring and data analysis by the contractor take approximately two months to complete. Scores are reported solely in terms of average percent correct per objective, per domain, and total test.

Scores are reported for individual students and summarized by school, parish, and State. Reporting on the basis of ethnic subgroups or sex is done only in the State Summary. Legislative and technical reports describing the program and reports of test results are produced and distributed.

Reporting/Dissemination

The school board of each parish receives an annual report of assessment results starting with the 1978-79 year. The same report is on file with the Superintendent of Education. The State Superintendent must also make an annual report of the assessment results. The State Department of Education prepares and submits an annual report to each local school district and to the Education Committees of both houses of the legislature. These reports present an analysis of results and test scores by local school district.

All student scores, average scores for classes or schools, and average scores for local districts are exempt from the Public Records Act. School boards are not allowed to identify individual students, classes, or teachers. All test scores released to the public must be accompanied by a complete analysis of socioeconomic factors beyond the control of the school which have an affect on student scores.

Reporting is done by grade level and subject area. The audience for reports consists of legislators, local school boards, the State Board of Education, the State Department of Education, colleges of education, parents, administrators, teachers, and students.

Use and Implications of Test Results

Consequences to students. The minimum standards for graduation and promotion developed at the State level have not yet been tied to the promotion and graduation policies of the local education agencies. Thus far, testing has no immediate consequences for students.

Consequences to programs. From time to time the Superintendent of Education may decide that the Department of Education shall conduct studies of the effectiveness of other courses. HB275, Act 621 also provides for teacher and school assessment and evaluation. The State Department of Education is currently working on State curriculum guides which are to be based on the minimum standards established for reading, writing, and mathematics.

Provisions for Special Populations

Future provisions for special populations have not yet been determined. To date, all special education students are expected to participate in the regular testing program. Special test forms have, however, been developed for deaf and blind students. Results for students in the gifted and talented categories, and those in speech therapy, are reported with those for the regular education population. All other special education categories are reported separately.

Program Resources and Costs

General program staffing. The program is run by the assessment staff of the State Department of Education which consists of four fulltime professionals and two full-time clerical staff, who work with the curriculum staff to develop standards and review items.

Approximate costs and funding sources. The cost for development of tests by Intran and the Advisory Councils and the training for the scoring of the writing sample was approximately $160,000; this was a one-time expense. The annual State budget for the program runs about $500,000 for staff and contracts; this is subject to change from year to year.

Program Evaluation

No evaluations of the Louisiana program have been conducted to date and are anticipated.

Future Directions

It is anticipated that the Louisiana State Assessment will continue to assess students in grades 4, 8, and 11 in the basic skill areas of reading, writing, and mathematics. Future expansion or modification of the program is not anticipated at this time.

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MAINE

Competency testing in Maine is currently under development by local school districts with technical assistance provided in two ways by the Department of Educational and Cultural Services. First, the local district planning will build upon data gathered as a result of Department activities that include: (1) a one-time assessment of basic skills measuring reading, writing, and mathematics in the eleventh grade reported in 1978; (2) a study to set standards for the assessment data; (3) a survey and hearings to document public opinion about the nature of and responsibility for goals, objectives, and standards for a student in Maine. Second, the Department engaged in the design of a Model Educational Planning and Evaluation System (MEPES) to assist local school districts to develop a comprehensive set of goals, objectives, and performance standards. Nine model districts are to participate in a tryout of MEPES during the 1979-80 academic year. Therefore, this report will concentrate on the data already gathered by the Department. These data are important because they represent the information that the Department and its advisors, the Citizens' Committee on Basic Skills, considered relevant to the planning of basic skills requirements for high school students. They also serve as indicators of possible future assessment activities on the part of local districts.

Legislative and Policy History

Policy history. The concern for measuring the competency of students in key skill areas has a long history in Maine. The State has systematically documented the performance of its students since 1970. An understanding of current events depends upon these earlier activities.

In 1970, the first of a series of yearly statewide assessments of student performance occurred. The assessment was patterned closely upon the objectives, items, and probability sampling procedures developed by the National Assessment of Educational Progress (NAEP). Ten subject areas had been assessed by 1977, including reading, writing, mathematics, science, citizenship, and career and occupational development. The assessment was conducted using a statewide probability sample of students at each of three age levels (11-, 13-, 17-year-olds). Maine educators selected objectives and items from existing sources, primarily NAEP, to reflect the content considered important for students in the State. The tests were administered by special test administrators to small groups of students in the schools. Student performance on individual test items, and on those items associated with one objective were analyzed by State, region, home, school, and student characteristics. Summary, interpretive, and technical reports were developed for educators in the local districts and at the universities to use in planning programs for students and for teacher trainees. This assessment program is known as the Maine Assessment of Educational Progress (MAEP).

In 1975, the State Board of Education formed the Task Force on High School Diploma Competencies and charged it with considering the appropriateness of a competency-based approach to graduation from high school. The Task Force reported to the Board in 1977, and recommended that:

(1) a competency approach be required for awarding diplomas and incorporated in basic school approval;

(2) meeting minimum competency levels be considered as one of the graduation requirements;

(3) the Department develop a nonmandated plan to serve as a model for implementing the competency approach;

(4) districts not wanting to adopt the State plan may submit their own plans for approval;

(5) tests for attainment of minimum competency levels be administered no later than the ninth grade;

(6) only students who have attained minimum competency levels and all other requirements be eligible to receive a diploma.

The Board did not act immediately on these recommendations, however, but chose to withhold action pending the completion of legislative action.

In 1977 LD734 was introduced in the legislature to establish new high school diploma requirements that included the provisions for testing and remedial programs. After public hearings, a new bill was drafted (LD1810), entitled An Act to Establish an Assessment of Student Performance in the Basic Skills, which required a one-time assessment of student performance in basic skills "such as reading, writing, and everyday arithmetic." The legislature considered the acquisition of these skills before high school graduation a matter of vital importance. Consequently, the results of the assessment were intended to assist in formulating future educational policies appropriate to the needs of Maine students with respect to these skills.

The act directed the Commissioner of Educational and Cultural Services to:

(1) obtain a "broad consensus of the views of Maine citizens" on the basic skills by means of opinion surveys, public hearings, or any other measures he may consider necessary;

(2) empanel a Citizens' Committee consisting of representatives from the State Board of Education, the Joint Standing Committee on Education, the Maine Education Council, the teaching profession, and the general public to assist in this task;

(3) prepare assessment materials, with the advice of experts in testing, to measure student performance levels in the basic skill areas established as a result of the Commissioner's survey of public opinion.

The assessment was to take place before January 1, 1978 and be reported to the legislature by February 1, 1978. The major portion of this program description discusses the activities resulting from the legislation.

Another activity initiated in 1977 and scheduled for completion in 1980 was the development of competency statements. The Department's Curriculum Division formed committees of both local school district and university personnel to define competencies for Maine students in reading, mathematics, writing, social studies, health and physical fitness, and consumer awareness. The statements will be distributed to schools when they are completed.

On June 14, 1978, the Board of Education adopted a policy entitled The Evaluation of Student Performance. The policy confirmed the principle that Maine students should expect "high-quality instructional programs. . . . Further, the Board supports the premise that the determination of the specific educational goals and objectives in which students are expected to attain proficiency should be locally determined. Such goals, objectives, and performance standards should be designed so as to insure that satisfactory achievement by students would enable them to progress through and exit from the educational system as well prepared as possible to meet the expectations for adult life" (SBE, 1978). The policy, therefore, directs that competencies be defined and performance standards set for all students. This is analogous to the recommendations of the Task Force. However, the method of implementing this policy was influenced by the data gathered during the studies conducted to comply with LD1810. The Board required that:

(1) each school system in Maine adopt a comprehensive plan of educational goals, objectives, performance standards, and an evaluation system that is responsive to the local unit's learning expectations not later than July 1, 1982.

(2) the Department develop and carry out an activity plan that will allow for a maximum amount of technical assistance and support to the local units, within the limits of available resources, during the period of implementation of this policy (SBE, 1978).

The Board policy is now being carried out.

Phase of implementation. The design of minimum competency testing will be the result of a multi-year planning phase which will build upon the experience gained by the Department and the local districts as a result of the Maine Assessment of Educational Progress. The initial stage, which has been completed, consisted of the Maine Assessment of Basic Skills and the related activities required by LD1810.

Two additional activities are under way. First, the Department's Curriculum Division has formed committees of local school district and university personnel to define the competencies in reading, mathematics, writing, social studies, health and physical fitness, and consumer awareness. These competencies will be available in 1980. Second, in response to the Board's policy statement, the Department has begun to develop a Model Education Planning and Evaluation System.

Goals and Purposes

General goals. The Maine Assessment of Basic Skills was designed to provide the State legislature, the Department, and local school districts with comprehensive information about student performance in the basic skills in order to determine the critical educational needs in Maine. The legislative act, which outlines the general goals to be accomplished, stipulates that:

(1) every child learn certain basic skills such as reading, writing, and the everyday use of arithmetic prior to graduation from high school;

(2) the learning of these basic skills, the successful completion of certain courses and the recommendations of educators should all be factors to be considered in the awarding of high school diplomas; and

(3) it is the intent of the legislature to implement an assessment of student performance in the basic skills to provide a foundation of information necessary for the preparation of policy to meet the educational needs of children.

Competencies

Competencies for the Maine Assessment of Basic Skills were selected by the Citizens' Committee with the technical assistance of the Department of Educational and Cultural Services and National Evaluation Systems (NES). The Committee was composed of 13 members; two each were to be appointed by the President of the Senate and the Speaker of the House (only three were actually appointed), and the other members were drawn from the State legislature, the Maine Education Council, the State School Boards Association, the State Elementary and Secondary Principals Organization, and the Maine Teachers Association (which included elementary and secondary teachers). This Committee was charged with identifying competencies in reading, mathematics, and writing, the three areas mandated for the assessment. A list of competencies in each area was compiled from materials provided by the National Assessment of Educational Progress (NAEP), several federally funded projects (for example, the Atlanta Assessment Project), and other materials collected by NES. The list was then presented to the Committee for its selection of the final set of competencies. For each skill area, several broad objectives were selected; then more detailed, operational, measurable objectives were associated with each broad objective. All of the objectives are presented in Table 1.

TABLE 1

Competencies measured in the Maine Assessment of Basic Skills

Reading

(1) *Comprehends what is read.* Comprehends the meaning of sentences and paragraphs, as well as recognizing paraphrases of what is read.

(2) *Analyzes what is read.* Identifies the main theme in a passage.

(3) *Uses what is read.* Follows written directions; obtains information efficiently.

(4) *Reasons logically from what is read.* Draws appropriate inferences from what is read.

Mathematics

(1) *Understands concepts of numbers and numeration systems.* Understands place value, rounding, and concepts of greater than and less than.

(2) *Computes with whole numbers, fractions, and decimals.* Adds, subtracts, multiplies, and divides.

(3) *Understands basic mathematical processes.* Knows common mathematical formulas and knows operations needed to solve common problems.

(4) *Solves mathematical problems.* Solves one- and two-step word problems.

(5) *Solves mathematical problems in a consumer context.* Solves word problems involving money.

(6) *Understands measurement and geometric units.* Knows conventional and metric systems and can make conversions within a measurement system.

Writing

Demonstrates the ability to write in a social and business context.

Standards and Standard Setting

Although standards were not set when the competencies were identified, the Citizens Committee was able to make recommendations on competency performance levels based upon information collected in a Benchmark Study, carried out as part of the Maine Assessment of Basic Skills to provide a framework for interpreting assessment results. For the Benchmark Study, a sample of 300 high school teachers in each subject area (reading, mathematics, and writing) participated. Teachers selected by each high school test coordinator reviewed each test item in their subject area and made two judgments: (1) the percentage of Maine eleventh-graders they expected to answer the item correctly; and (2) the validity of the item as the measure of a basic skill. The second judgment was requested to assist the Department and the Citizens' Committee in refining their definition of "basic skills." Approximately 80% of the teachers sampled in each area returned completed surveys.

After the contractor tabulated the responses to the survey, the results were presented to a group of content specialists selected by the Department. This group was called the Benchmark Panel and held separate meetings for each subject matter area. Panel members' tasks were to reach consensus about the expected level of performance and to decide whether the item measured a basic skill. The consensus was defined as two-thirds agreement of panel members. The levels of expected performance became the standard against which the actual performances of students on a statewide basis were compared.

Target Groups and Testing Schedule

The Maine Assessment of Basic Skills occurred during the last week of November 1977. At this time, all eleventh-grade students were tested with the exception of those who were identified as "educable mentally retarded," and those who were handicapped in such a way that they could not respond to the paper and pencil version of the test without assistance. Census testing was mandated to provide information to all local school districts. In both public and private schools, a total of 18,184 eleventh-grade students were eligible for testing. For reasons such as chronic truancy, illness, and ineligibility, about 500 students were not tested.

In addition to the assessment at the eleventh-grade level, a sample of eighth-grade students was tested to obtain information compatible with the Maine Assessment of Educational Progress, and to compare the performance of eleventh-graders with that of eighth-graders. The eighth-grade sample consisted of about 1,000 students and was stratified by region and size of community. The results for the eighth-grade students were available at the same time as those for the eleventh-grade students.

Test Instruments

A three-part test was used to measure the performance of students in grades 8 and 11. Working in cooperation with the Department and NES, the Citizens' Committee was responsible for choosing specific test questions from a set of test items which matched each of the selected objectives in reading, mathematics, and writing. The set of objectives and their related items was organized by NES, which drew the materials from several sources, including the National Assessment of Educational Progress, federally funded projects, and its own bank of items. However, the final selection was made predominantly from materials developed by NAEP. All of the items were considered to be criterion-referenced.

The tests consisted primarily of multiple-choice items. For reading, 58 items were selected; for mathematics, 74 items; and for writing, four items. In addition to the multiple-choice items for writing, three open-ended items were selected. These items asked the students to: (1) fill out an application blank, (2) order a pair of sea horses through the mail, and (3) describe a traffic accident. A separate answer sheet was developed for the reading and mathematics items which made up one booklet. The writing items and their related responses were recorded in a separate booklet.

The Citizens' Committee also requested that information be collected about student, home, and school variables which could be analyzed to determine their relationship to student performance on the basic skills tests. The test booklet for reading and mathematics included 14 additional questions to measure such variables as the sex of the student, whether a language other than English was spoken in the student's home, and student attitudes toward school. For eleventh-grade students only, two questions were developed which gathered information about program enrollment (e.g., college preparatory vs. agricultural vs. business), and the number of mathematics courses taken.

Because the test items all were developed and reviewed by the original developer, no formal screening for bias was undertaken by the Citizens' Committee. The Benchmark Panel reviewed the items after they had been selected and administered to verify that each item measured a basic skill. This information was used during the analysis of the test results.

Test Administration

The Board of Education asked each local district to appoint one person at each grade level to act as a test coordinator who was to be responsible for scheduling test sessions, for appointing proctors for the test sessions, and for supervising all other aspects of testing in the district.

Five test coordinators' workshops were held throughout the State. To standardize the testing sessions, test coordinators were told to schedule one three-hour session as the time necessary to read instructions, to administer the student questionnaire, and to administer the three basic skills subtests.

Parental permission for the test was required only when called for by local district policy. Testing sessions were held in 145 high schools, 89 junior high schools, and five regional adult education centers.

Scoring and Analysis

Scoring followed the procedures developed by the original writers of the test items. For multiple-choice items, the scoring was a comparison of the response selected by the student against the response keyed as correct. The open-ended test items in writing were scored by the contractor following the procedures developed by NAEP, the source for all three items. The scoring criteria for the three items focused primarily on whether the student provided the information called for. The most extensive amount of information was required by the question which asked students to fill out an application blank. Students had to fill in seven parts of information accurately, including: (1) name; (2) student address; (3) city, county, and state; (4) date of birth; (5) sex; (6) height, weight, hair and eye color; and (7) the date. A student received a score of five if five subparts of the seven parts were completed correctly. Ordering sea horses required two parts of information; describing a traffic accident required five parts of information. Results for these items were integrated before analysis with results from the multiple-choice questions in writing, reading, and mathematics.

The analysis of the results was directed at five major audiences: (1) the legislature, (2) the Department, (3) administrators, (4) teachers, and (5) students. However, the primary audience for the study was the legislature.

For the legislature, the State results were summarized in each of the three basic skills areas. The average achievement and the range of achievement was an overall estimate of the performance of the students in reading, mathematics, and writing. In reading and mathematics, where all items were multiple-choice and were related to specific objectives, the results were reported by the percent correct both for the total skill area and also for each of the objectives. In addition, the performance of eleventh-grade students was presented in histograms which also presented the performance of the eighth-grade students for comparison. Therefore, the legislature had a picture of the performance of eleventh- and eighth-graders by skill area and by objective for reading and mathematics. A cumulative distribution of the percentage of items answered correctly for students in grades 8 and 11 was also provided. Therefore, the legislature could determine the total percentage of students who scored at or below a particular percent correct.

In writing, results for only seven items were reported (three were open-ended items). These results were presented in terms of the percent answering the item correctly for the multiple-choice items, and the percent answering zero to the maximum number of parts correctly for each of the open-ended items. The results for students in grades 8 and 11 were presented separately.

In addition, the statewide performance in each of the three skill areas for both eighth- and eleventh-grade students was presented according to categories established by responses to the questions on the student questionnaire.

Because many of the items on the Maine Assessment of Basic Skills test had been developed and used in previous NAEP assessments, and some items had been previously used in earlier MAEP assessments, it was possible to compare student achievement on various levels with national, regional, and longitudinal data. The performance of Maine eighth- and eleventh-graders was compared to the performance of samples of 13- and 17-year-old students in the nation and in the Northeast region. The comparison was made only for those items which were drawn from NAEP materials and administered by NAEP to the same age groups nationwide, to determine whether students in Maine scored the same as, higher, or lower than students in the comparison group.

Because Maine had assessment results in reading, mathematics, and writing from previous years of the MAEP study, longitudinal comparisons of results were possible. In particular, the MAEP results for writing, reading, and mathematics in 1972, 1973, and 1975 were compared. These data present information not generally available in similar assessment programs.

As mentioned earlier, a Benchmark Study was conducted. This study collected information concerning the expectations of teachers in each of the three basic skill areas concerning the expected percentage of Maine eleventh-grade students who would answer each item correctly. These results were also presented to the legislature.

Two additional analyses of information were presented to the legislature. The first was an analysis of the percentages of eighth-grade and eleventh-grade students choosing each response option on the student questionnaire. The questions on the student questionnaire were grouped into the categories of student attitudes, school variables, and home variables.

The second analysis presented to the legislature involved information collected in a Diploma Survey and in public hearings. For the Diploma Survey, a questionnaire was mailed to a sample consisting of 500 parents and 250 community leaders; 24% of the parents and 31% of the community leaders filled out and returned the survey instruments. Analysis revealed that a large portion of the respondents believed that Maine high School graduates lacked the skills necessary to succeed in adult life. Respondents agreed overwhelmingly that skills in reading, writing, and mathematics were those which should be tested if students were, in the future, required to pass a standardized test to receive a high school diploma. However, in their answers to the question of who should assume responsibility for setting statewide standards for high school graduation, the respondents displayed agreement on only one point: less than 2% believed that any one agency should have this responsibility. Instead, those surveyed suggested that such groups as the Board of Education, the Department of Education, local school boards, and the teachers and principals of local districts should participate in setting the statewide graduation requirements. Only 10% believed that the local town government should have a voice in establishing the graduation requirements, and only 13% held the view that the State legislature should be so involved.

The results of the Diploma Survey were augmented in November 1977 by information gathered at public hearings held at five different sites. Although public attendance was light, the testimony at these hearings disclosed that the public had certain concerns about student achievement in the basic skills. Some members of the public held the view that high school graduates entering business and industry seemed unable to apply their skills in a work situation, perhaps because the students did not make the necessary connection between their studies and the demands of adult life. On the issue of establishing high school graduation requirements, the public discussion indicated that the resultant clarification of objectives might be beneficial to students. On the other hand, some members of the public expressed the view that the establishment of minimum standards might have an adverse effect in that the minimum standards might evolve into maximums and thereby lower the level of student achievement. Public opinion was, however, united in the view that local school districts should have the power to establish standards and the responsibility for assessing student performance. Many of the participants also believed that the State should supply the local districts with guidance and technical assistance as necessary to carry out these activities.

The legislature, therefore, had a wealth of information concerning achievement, attitudes of students, and attitudes of the public concerning minimum competency testing programs. This information was reported directly to the legislature by the Department and the contractor.

The Department school administrations and teachers were provided with all of the information that went to the legislature and the added information produced in detailed computer-generated reports. In these reports, the performance of students on each item was reported. Each item was reported in terms of the percent correct for each alternative. In addition, an analysis of the percent correct on each item by each of the major reporting groups available was produced. Further, a detailed analysis of the results for each objective for each grade showed the p-value, the standard error of the p-value, the group effect, the standard error of the group effect, the sample size, the reporting groups, and a histogram of the p-value for each of the reporting groups. This information was generated for both grade levels and across all objectives.

Finally reports were generated for teachers which listed all of their students and the percent of items associated with each objective that the students in each class answered correctly. Teachers received a printed list of the objectives with the number of items associated with that objective, the average number of items answered correctly, and the average percent of items answered correctly for each objective.

Reporting/Dissemination

The initial report of the results of the Maine Assessment of Basic Skills was sent to the State legislature in February 1978. This report summarized the results and the analyses described in the previous section. Results were presented orally by the Department and contractor. A written summary was produced which contained the highlights of the results, along with 14 conclusions and seven recommendations which were derived from the information by the Citizens' Committee, in cooperation with the Department and the contractor. The following is an example of one conclusion:

CONCLUSION 5: Despite overall high performance on the test, there was a tendency for scores to be higher on objectives measuring basic understanding than on objectives measuring the application of these skills or skills at a higher cognitive level (Rubinstein & Sorce, 1978, p. 57).

The complete set of recommendations was as follows:

RECOMMENDATION 1: It is recommended that the legislature NOT enter into the area of establishing competency requirements on a statewide basis as a prerequisite for the awarding of a high school diploma.

RECOMMENDATION 2: It is recommended that the state's role should be to provide technical assistance to local education agencies with regard to the establishment of standards for student performance rather than to impose upon them a set of standards or a process for setting them.

RECOMMENDATION 3: It is recommended that the state include in the school approval regulations the requirement that local education agencies implement a system of local evaluation conducted periodically to generate information which can be evaluated against the locally defined objectives; this requirement should be put in place over a responsible period of time with due technical assistance on the part of the state.

RECOMMENDATION 4: It is recommended that the state develop a model assessment plan (including methodology/process, outline of content and suggested competencies) to be offered to local education agencies for adaptation, modification, or rejection at their option, with the provision that the model be submitted for public scrutiny, review, and comment prior to formal release to the LEAs. Additionally, it is recommended that the model address the assessment of "life skills" as well as the more traditional academic or basic skills.

RECOMMENDATION 5: It is recommended that local education agencies undertake the responsibility of clarifying to their local publics the achievement standards upon which the awarding of the high school diploma is based in order to define more clearly and to disseminate the meaning or significance of the high school diploma.

RECOMMENDATION 6: It is recommended that local education agencies focus attention on the expansion of existing programs of early and continuous identification of children with learning problems as well as early and continuous remediation of those problems.

RECOMMENDATION 7: It is recommended that an individual at the state level be charged and funded to provide technical assistance to local education agencies in the use and interpretation of assessment data in order to provide continuity in the application of statewide data to local purposes and to strengthen the locally developed evaluation efforts (Rubinstein & Sorce, 1978, p. 76).

Following the report to the legislature, the computer analyses were distributed to the Department and districts. In addition, several narrative documents were produced and distributed to the appropriate audiences. A technical report was distributed to the Department and key educators in the State. A Summary and Interpretative Report (Rubinstein & Sorce, 1978) was distributed to the Department, key educators in the State, and each school district. A Highlights Report was developed and distributed to each school district and made available to the public.

Use and Implications of Test Results

Consequences to students. Because the statewide assessment was designed primarily for legislative decision making, there were no mandated consequences for students. Individual school districts and teachers were encouraged to use the test results for an individual student to recommend appropriate remedial activities. The Summary and Interpretive Report was used by local districts and administrators to judge the appropriateness of an individual pupil's results, and the need for revising the curriculum experiences for some students.

Consequences to programs. As a result of the Maine Assessment of Basic Skills, the Board of Education issued a policy statement in June 1978. In this statement, the Board gives "its policy support and commitment to the goal of having each school system in Maine adopt a comprehensive plan of educational goals, objectives, performance standards, and an evaluation system that is responsive to the local unit's learning expectations no later than July 1, 1982" (SBE, 1978). Therefore, although the legislature initially mandated the one-time assessment of basic skills in the State of Maine, it did not take any direct action following the report of the results. The initiative for action was taken up by the Board of Education in the above policy statement. However, this statement was in close agreement with the recommendations derived from the overall study.

In addition to the general policy, the Board of Education required that the Department supply "technical assistance and support . . . within the limits of available resources" to local districts in their implementation of the policy.

Provisions for Special Populations

In the Maine Assessment of Basic Skills, eleventh-grade students were exempt if they were educable mentally retarded, or handicapped in such a way as to be unable to respond to the test. These were the only provisions made for special populations during the implementation of the assessment.

Program Resources and Costs

General program staffing. A half-time assessment professional monitored the technical aspects of the Maine Assessment of Basic Skills. Secretarial support was also provided. A contract was issued, after competitive bidding, to National Evaluation Systems to implement the assessment.

Approximate costs. Approximately $130,000 was spent on the Maine Assessment of Basic Skills for outside services. Additional funds from the Department have been used to support the half-time professional staff.

Funding sources. The assessment was funded by federal and State monies in the proportion of about 60/40 respectively.

Program Evaluation

No separate external evaluation was conducted of the Maine Assessment of Basic Skills.

Future Directions

The Department is in the process of implementing the intent of the Board policy statement of June 1978 by providing technical assistance in planning and evaluation, creating a Model Educational Planning and Evaluation System, and redesigning the Maine Assessment of Educational Progress. In carrying out these activities, the Department has identified nine local school districts, across the State, that are to serve as pilot test sites for procedures and ideas associated with the Model Educational Planning and Evaluation System.

The major thrust of activities is focused on MEPES, which is intended to:

(1) strengthen the capabilities of local education agencies in planning and evaluation;

(2) provide a fully developed system to be made available for the conduct of a comprehensive educational planning and evaluation program and a local education agency;

(3) develop the capability of the Department to support the educational planning and evaluation activities of local education agencies through the provision of technical staff assistance and material resources; and

(4) redesign the Maine Assessment of Educational Progress to be compatible with local and state needs for educational planning information (Maxcy, 1979b, p. 2).

Although MEPES is still in the planning stage, the intent is to include several components in the system. First, there will be a component to facilitate educational planning by local education agencies. This component is to include a detailed manual which will describe the process of educational planning and its implementation, and will relate the process to the instructional program as it influences students. To provide technical support to local school districts, the second component will be in the form of a file containing both objectives and associated criterion-referenced test items for each content area. These materials will be used by local education agencies to define in more detail their curriculum content and structure, and to develop testing programs with sufficient flexibility to diagnose individual student needs and overall program needs. In addition, this component will include detailed guidelines for test construction, scoring, analysis, and reporting of results. Third, there will be a component designed to train district and Department personnel by means of intensive workshop experiences. The content of the training will include a detailed description of the first two components of the program.

In MEPES, Maine will have a systematic process by which local districts will be able to "adopt a comprehensive plan of educational goals, objectives, performance standards, and an evaluation system" (SBE, 1978). With all the components in place, districts can monitor both the achievement of students against performance standards, and the quality and effectiveness of their programs.

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MARYLAND

In January of 1977, the Maryland State Board of Education adopted Project Basic to establish by 1982 competency-based graduation prerequisites in the basic skills areas of reading, writing, and mathematics, and the life skills areas of survival, citizenship, work, and the arts/physical education. Implicit in the Board's action was the intention that all students in Maryland, prior to graduation, receive adequate instruction in order to acquire those basic skills and life skills deemed important by a consensus of the general public and Maryland educators. Project Basic is regarded as an instructional program with a built-in assessment component to ensure adequate instruction and skills reinforcement.

The State Board of Education established a Project Basic Office within the Department of Education which works closely with Project Basic Coordinators appointed by each of the 24 local Maryland school systems. In order to assist the local districts and to coordinate State procedures with local procedures, the superintendent of each local school district appointed in the winter of 1977 one person to act as liaison between that district and the Project Basic office. The primary role of the Project Basic Coordinator is to assist Project Basic in the development of the statewide implementation plan, assist the local school districts in the development of their implementation plans, keep the district superintendent and other personnel informed of Project Basic activities, and in turn report suggestions, reactions, and general concerns of the local school districts to Project Basic.

In addition, the Board of Education has assigned one Project Basic staff member (called the Project Basic Facilitator) to each local district. The Project Basic Facilitator acts as a consultant to the local districts to assist in implementing the program, i.e., in developing remediation and instructional programs within the local school system.

Legislative and Policy History

Policy history. In 1972 the State legislature enacted accountability legislation (Public Law, Art. 77, Sec. 28a) which called for the organization of educational programs to assure attainment of established instructional goals and objectives throughout the State. Later, the

General Assembly, responding to concern over national and State deterioration in SAT scores and perceived deficiencies in secondary education, enacted the Athey Bill (1975, House Bill 1462, Chapter 559). The impact of this legislation was to mandate to the State Board of Education and the State Superintendent that they define and implement assessment procedures in order to determine the effectiveness of the State's education program. As part of the implementation of these legislative mandates, the Board enacted a resolution to establish a competency-based graduation program which called for the assessment of student progress along the educational continuum.

The State Board of Education, on December 22, 1976, issued a competency-based graduation policy entitled: The Mission of Schooling. The policy states that schooling must lead to demonstrated competency for graduation in the areas of basic skills (reading, writing, and mathematics) and life skills (survival, citizenship, work, and the arts/physical education). The development of competencies in each area is intended to result in three levels of learning:

(1) gaining of information;
(2) training toward specific skills;
(3) developing the capacity for critical thought.

Finally, the policy asserts that schooling is not the sole province of schools but rather a shared responsibility with family, neighborhood, church, community, self, and the many institutions which affect one's life.

Phase of implementation. The implementation schedule is mandated by the State Board of Education. Eventually, all students, in order to receive a Maryland high school diploma, will be required to pass (1) three basic skills tests--the Maryland Functional Reading, Functional Mathematics, and Functional Writing Tests; (2) one Life Skills Test--comprising the three areas of survival skills, citizenship skills, and work skills; and (3) an arts/physical education prerequisite (verified by local superintendents). The requirements are, however, being phased in gradually. In 1982, the graduating class in Maryland will be required to pass the Maryland Functional Reading Test for graduation. Beginning with the graduating class of 1984, all students will be required to pass both the Maryland Functional Reading and Functional Mathematics Competency Tests. Students graduating in June 1985 or 1986 (yet to be determined) will be required to pass not only the Functional Reading and Mathematics Tests, but also the Functional Writing Test, the Life Skills Tests of survival, citizenship, and work; and acquire certification of participation in programs which instruct for the graduation prerequisite in leisure.

At present, only the Functional Reading Test is in place. The Functional Mathematics Test has been developed by the Maryland Department of Education, and National Evaluation Systems is developing the Functional Writing Test and the Maryland Life Skills Test under contract with the Department.

Goals and Purposes

The primary goal of Project Basic is to ensure that all Maryland students acquire minimum competency in the basic skills of reading, writing, and mathematics, and the life skills of survival, citizenship, work, and the arts/physical education. The competencies are to be a prerequisite for graduation. The basic skills competencies are to be assessed early in grade 9; students who do not pass to receive appropriate instruction and be retested yearly. A baseline study to be conducted in the fall of 1979 will assist in determining the grade at which the initial Life Skills Test of survival, citizenship, and work is to be administered. Students will be pretested in the early high school grades to allow adequate time for diagnosis and remediation for students who do not demonstrate mastery during the initial test administration. Tests will be administered yearly to students who do not pass any one of the tests. Students are only required to retake portions of the basic skills or life skills tests which were not passed initially (e.g., reading, mathematics, writing, citizenship, survival, or work). The State Board of Education has mandated in its bylaws the responsibilities of the local school districts for developing and monitoring remediation programs. The test results will serve to evaluate instructional programs in the individual schools and to determine what additional instructional resources may be needed.

Competencies

In December 1976 the Maryland State Department of Education outlined the preliminary basic skills and life skills competencies that were to constitute graduation prerequisites. In order to further define the achievement goals and competencies, the Project Basic office contracted with National Evaluation Systems (NES) to conduct a Needs Assessment Study. The study was designed to answer such questions as:

(1) Do operational instructional goals and objectives already exist for the basic skills and life skills areas either in the Maryland State Department of Education or in the local school districts of the State?

(2) If a goals-and-objectives curricular structure does exist, to what degree is there a correlation between the goals of the State Department of Education and those of the local districts?

Following the Needs Assessment Study, the Project Basic office and NES held a three-day workshop to generate the basic and life skill competencies that were to become graduation prerequisites. School principals, teachers, students, and representatives of educational organizations, the public, the business community, and the higher education community all participated in this workshop. Validation of the competencies then took place through a survey of some 3,000 parents and a total of 20,000 educators, legislators, and business representatives from around the State. The competencies were refined by NES and the Project Basic office as a result of the consensus validation and were published in 1978 (Maryland, State Department of Education, Maryland's Project Basic: Competency Generation Procedures). Further refinement of the competencies continued as the instructional and assessment components of the program were developed; competencies and objectives were adopted by the State Board in August 1979.

The basic and life skills adopted by the State Board of Education as minimum requirements for graduation were first defined by broad goal statements, then competency statements, then further defined by very specific objectives. The goal and competency statements for each skill area are presented in Table 1.

The complete set of competencies is listed in the Declared Competencies Index (Maryland, State Board of Education, 1979a). This publication also designates what instrument is to be used in assessment of each basic skills and life skills area and the instructional resources available for each.

TABLE 1

Goals and Competencies Defined for Maryland's Basic Skills (Reading, Writing, and Mathematics) and Life Skills (Survival, Citizenship, Work, The Arts/Physical Education)

Basic Skills

Reading

Goal: Meet the reading demands for functioning in society

Competencies:

1) following directions
2) locating references
3) gaining information
4) understanding forms

Writing

Goal: To use the writing process to communicate personal information

Competency:

1) recording personal information for self and others

Goal: To write to respond to demands and obligations of society

Competencies:

1) writing messages and reports
2) writing letters
3) completing forms
4) writing sentences and coherent paragraphs

TABLE 1 (continued)

Mathematics

Goal: To perform mathematical manipulations

Competencies:

1) computing and solving open sentences
2) measuring and constructing
3) collecting and/or reading data

Goal: To understand concepts and processes

Competencies:

1) understanding numbers and numeration
2) understanding geometric properties and measurement
3) understanding properties and processes of the number system

Goal: To solve specific mathematical problems

Competency:

1) solving and checking

Goal: To use mathematical reasoning and processes to meet personal and societal needs

Competency:

1) solving personal/societal problems

TABLE 1 (continued)

Life Skills

Survival

Goal: To demonstrate a knowledge of the factors which affect an individual's physical, mental, and social health

Competency:

1) knowing physical health and safety practices

Goal: To make effective decisions and take appropriate actions regarding one's self in relation to the use and control of nature and technological systems

Competency:

1) understanding the interaction of people with the natural environment

Goal: To know and use human resources in meeting life needs and pursuing personal interests

Competency:

1) knowing community resources

Goal: To know and apply decision-making skills to the solution of individual and community consumer issues and economic processes and problems

Competencies:

1) knowing consumer rights and responsibilities
2) understanding the management of personal finances
3) understanding consumer economics

TABLE 1 (continued)

Survival (continued)

Goal: To demonstrate a knowledge of the implications of effective group membership, including the implications of parenting

Competencies:

1) demonstrating social awareness
2) possessing effective parenting skills

World of Work

Goal: To know and understand the options, opportunities, and requirements of the world of work

Competency:

1) understanding the nature, structure, and requirements of work

Goal: To understand and value the relationship between personal interests and abilities and work options and opportunities

Competency:

1) identifying and relating personal qualities to employment

Goal: To demonstrate a broad range of entry-level employability skills

Competency:

1) applying job-seeking skills

TABLE 1 (continued)

World of Work (continued)

Goal: To apply career planning and decision-making skills

Competency:

1) demonstrating career planning and development skills

Citizenship

Goal: To understand and accept individual and group responsibilities necesssary for participation in a democratic pluralistic society

Competency:

1) knowing civic responsibilities in a democratic society

Goal: To know the functions of law and support a system of justice in a democratic, pluralistic society

Competency:

1) understanding the values, functions, and limitations of a system of law

Goal: To know and value individual, societal, and constitutional rights

Competency:

1) knowing and exercising individual, group, and societal rights

TABLE 1 (continued)

Citizenship (continued)

Goal: To know the form, function, and processes of government at all levels

Competencies:

1) demonstrating a knowledge of the organization of local, state, and national governments
2) demonstrating an understanding of the processes of government

Goal: To understand local, state, national, and world affairs in order to participate in civic processes

Competency:

1) demonstrating an awareness of civic affairs and processes

The Arts/Physical Education

Goal: To understand the need for physical fitness

Competency:

1) experiencing physical activities

Goal: To understand the role of the arts as forms of expression

Competency:

1) exploring expression through the arts

Standards and Standard Setting

Only the Functional Reading Test is now in operation; it is, therefore, the only test thus far to have standards set for it. Further, the standards apply only to the graduation test, not to the pretest given in the seventh grade. The Project Basic office set a passing score of 80% on each of the four competencies defined for reading after examination of field-test data. A number of specific objectives comprise each competency, so that students must perform 80% of the total objectives in order to pass the test.

Standards for the Functional Mathematics, Functional Writing, and the Life Skills Tests will be set in October 1979 following test development and tryout.

Target Groups and Testing Schedule

The basic skills tests for graduation--Maryland Functional Reading, Maryland Functional Mathematics, and Writing--are to be given for the first time in grade 9. Students who fail one or more of these tests may retake the test that was failed once a year through grade 12 until it has been passed. A pretest that covers similar material assessed by the basic skills test is also given to grade 7 students. The purpose of this pretest is to provide teachers with diagnostic information on how well students are likely to perform on the graduation competency tests (and to assess school instructional programs), and to make students, parents, teachers, and district and State educators aware of student needs prior to the graduation tests.

Decisions as to when the life skills test will be given and when students will have the opportunity to acquire the the arts/physical educational certification have not yet been made.

The schedule for implementation of competency tests in the life skills area, outlined broadly in Section VI of Project Basic: Guide for Statewide Implementation (Maryland, State Department of Education, 1978), is as follows:

August 1979	Pilot schools--necessary materials distributed.

October 1979	Pilot school activities begin, usually in three schools per district. Object to try out instructional ideas, to finalize assessment measures, and to find and solve unanticipated problems of implementing Project Basic statewide.
June 1980	Pilot activities completed.
July 1980	Local district summary report of progress to date, sharing achievements, problems, and plans from 1978 to October 1980.
September 1980	Statewide production/dissemination of new, revised and updated Project Basic materials. State/local workshops on materials, orientation of students, parents, and citizens on Project Basic.
June 1981	Graduation-related testing in one or more of the life skills areas will occur.
September 1981	Certification of competency-inclusive curricula in use by local education agencies.
June 1982	First-time reading competency test required for graduation.
June 1984	Projected first-time mathematics competency test required for graduation.
June 1985 or 1986	First-time competency tests required in life skills areas. The date for the above may not be finally determined until results of a January 1980 progress check are analyzed.

The schedule for life skills testing will be determined in part by a baseline study to be conducted in the fall of 1979. As in basic skills testing, students will be pretested in early high school.

Test Instruments

Basic skills. The three basic skills tests--Maryland Functional Reading, Functional Mathematics, and Writing--will be based upon the minimum set of objectives identified in the Declared Competencies Index and taught in grades 7-11. The Maryland Department of Education developed the mathematics test, contracted with Services for Educational Evaluation for the development of the reading test, and contracted with National Evaluation Systems for the development of the writing test. Both the reading and mathematics items are in a multiple-choice paper-and-pencil format. The format of the writing test has not yet been determined.

The pretest to be given in grade 7 will consist of items similar to those on the graduation competency tests, but will assess the material as it is taught in grades 1-6.

Life skills. The Life Skills Tests will be based upon the minimum set of graduation prerequisites of citizenship, survival, and work identified in the Declared Competencies Index and will assess selected objectives taught in grades 7-11. A paper/pencil multiple-choice mode will be used for the citizenship, survival, and work skills sections of the test. Each section will take approximately 45 minutes to administer, and will include between 40 and 50 items (5 items per objective). In a limited number of instances, objectives in work may be assessed through a verification mode; this will be determined by the results of the baseline study to be conducted in the fall of 1979. If a verification mode is adopted, local districts must verify student acquisition of objectives by the end of grade 11 as part of the reporting system. The demonstration of competency in these areas will be completed when both the paper/pencil and verification modes are achieved successfully.

The Arts/Physical Education objectives. Students will meet prerequisites in leisure by participating in programs offered by local districts. The superintendent of each local district will certify annually that the leisure competencies which appear in the Declared Competencies Index are taught in local programs. In this way the music and art programs offered locally in grades 1-8 and the physical activity programs offered in grades 1-9 will permit local certification of leisure competencies.

Procedures for test development. The basic writing skills and life skills criterion-referenced tests are being developed through a sequence

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of six steps by the testing contractor (National Evaluation Systems), content specialists from the instructional divisions of the Maryland State Department of Education, local school district personnel, teachers, students, and the Project Basic team. An outline of the sequence follows:

(1) The testing contractor developed a set of initial assessment specifications for the objectives in consultation with the Project Basic team.

(2) Using these specifications, the contractor constructed a pool of test items of two types: paper/pencil (multiple-choice) and verification.

(3) Items were reviewed and revised by the Project Basic team, teachers, and content specialists. The contractor selected items for a spring field-testing on the prepilot for the purpose of determining item characteristics.

(4) The second large-scale field study, in the fall of 1979, will validate the test packages and give information on the status of students in grades 7-11 (baseline) and assist in determining the cut score.

(5) The preliminary test packages will also be tried out on students and reviewed by teachers in the pilot schools in 1979-80 in the State's 24 local school districts.

(6) The results of the field studies and the pilot schools' tryouts will be used to determine final instruments and pools of test items to be filed with the Program Assessment Branch, Division of Instruction of the Department of Education, by June 1980. The statewide assessment and reporting schedule for the testing required by the Department will be issued and conducted by this Branch. The details of the test development will be included in the Validated Assessment Task Index.

Test Administration

Local school personnel will administer the competency tests. The procedures for administering the tests are standardized and included in the Project Basic Guide developed by the Project Basic Office. The Project Basic Coordinator and local school systems are responsible for developing the procedures for training test administrators and implementing the testing program.

Scoring and Analysis

The scoring and analysis of the tests is to be done by the Department of Education. Individual student score reports will be produced that will include the student's score on each test and subtest or competency on a particular test. Individual scores will become part of the student's cumulative record. Summary statistics for each test and subtest will be computed according to class, school, and local district.

Reporting/Dissemination

Project Basic disseminates information through brochures developed for parents, students, and school personnel. The Maryland State Board of Education Bylaws mandate that parents or guardians be informed of the test results as well as teachers, the State, and local school districts. The local districts, schools, and the State Board of Education will share the responsibility for informing the public of the test results. The local districts are to report test results to the Department of Education together with the remedial programs and curriculum changes or revisions designed for the deficiencies identified by the competency test results.

Use and Implications of Test Results

Consequences to students. A student who fails to pass all of the basic competency tests mandated by the Maryland Board of Education will not be graduated. By contrast, the Maryland high school diploma will certify that a student has demonstrated the minimum competencies considered important by the citizens of Maryland.

The State Board of Education currently offers some options to students who have been enrolled for four years of high school and who at the end of grade 12 have not fulfilled the Maryland Functional Reading Test. They are as follows:

(1) Students with a school history of being unable to perform paper-and-pencil assessments may, with the approval of the local superintendent, use tests other than paper-and-pencil to demonstrate their mastery of at least 80% of the material tested by the Maryland Functional Reading Test to a panel of three professional school staff members.

(2) Students may, with the approval of the local superintendent, return to the high school to enroll in day, evening, or summer reading assistance programs whenever they are available, in order to obtain the skills necessary to pass the test.

(3) Students may, with the approval of the local superintendent, enroll in basic adult continuing education classes in order to acquire the skills to pass the test.

Consequences to programs. According to the Department of Education, local districts are responsible for teaching, throughout grades K-12, all of the competencies listed in the Declared Competencies Index. Although the Department provides a scope and sequence framework for the competencies to help districts ensure appropriate instruction at appropriate times, the districts are to develop the actual curriculum and instructional activities themselves. State/local district-developed instructional activities guides are available for each competency and objective. Local districts have the option of their use.

Provisions for Special Populations

A State Board of Education bylaw (13.03.01 General standards) mandates exemption of certain students from meeting competency requisites for graduation. Exempted are:

(1) Students already identified as handicapped at Levels IV and V (see Regulation 06 E (3) (d) and (e) under COMAR--Annotated Code of Maryland--13.04.01). Of the six levels of special education, levels 4, 5, and 6 are excluded from testing. These students are in restricted environments outside of the school system.

(2) Students transferring into the Maryland public school system after February 1 of their senior year, unless these students request a waiver of this exemption from the local superintendent of public schools.

At present there is some discussion in the State over the inclusion of in-school special education students in the testing program. One group feels that these children should be included; another group feels it would be unfair to include special education students. A major study using various handicapped levels is a part of the October 1979 field study. A decision on provisions for special populations will be based on the outcome of this field work. The Project Basic office and the Maryland Attorney General's office are exploring the legal implications of excluding or including special populations in the testing program, with a final recommendation to be given to the State Board of Education for action.

In addition, Project Basic will be considering ways to handle limited English-speaking students. One possibility under consideration for the reading test is to provide a translator to interpret directions for these students. The students, however, must still take the test and answer in English.

Program Resources and Costs

General program staffing. Maryland's Project Basic staffing is based on a "collaborative effort" between the 24 local school systems and the Project Basic office staff at the Maryland State Department of Education. The Project Basic office currently has a staff of 13, coordinated by the Assistant Deputy Superintendent. Five members of the Project Basic office staff come from teaching and administrative positions in the Maryland school systems, and assist local district personnel in Project Basic implementation by means of telephone consultations or on-site visits. At the local school district level is a Project Basic Coordinator, designated by the local district superintendent, who coordinates all phases of Project Basic implementation. The Coordinator also serves as the liaison between the local school district and the Department of Education for all Project Basic activities, and as a source of information about Project Basic at the local level to maintain understanding of the Project's goals and the procedures necessary to its success.

Approximate costs. There are no hard cost figures available for Project Basic. The costs to the State Department of Education for developing reading and mathematics competency tests amounted to about $25,000 each. Further costs are expected to be incurred over the next five to six years for the development of competency tests in writing and the survival skills areas. In addition, the Department of Education provides materials in the form of guides, packages, and computerized systems; finances Task Force meetings, test administrators and scorers, and workshops; and, in fiscal year 1980, will pay half the salaries of the local district Coordinators. State-provided Project Basic funds for fiscal years 1979-1982 are to be confirmed only after the annual budgets have been approved.

At the local school district level no cost figures are available. The local school districts have assumed the costs for Coordinator salaries for fiscal years 1979 and 1980 and will pick up one-half these costs for fiscal years 1981 and 1982. In addition, the districts pay for the duplication of materials as needed, local curriculum guides, sequence charts, data collection, and other materials needed at the local level. Other costs to the local districts are released time for personnel involved in Project Basic and for substitute personnel. No annual dollar figure has been assigned to these costs.

Funding sources. Project Basic funds at the State level come from the annual approved budgets of the State Department of Education. At the school district level Project Basic funding is presumed to come from district budgets.

Program Evaluation

The Maryland State Department of Education has the responsibility for evaluating the effectiveness of the Project Basic activities for the period extending from the present to June 1985 or 1986 when all assessment is expected to be in place. Once the Project Basic program is fully operative, formulation of a variety of methods for monitoring progress and evaluating results is anticipated.

Future Directions

Maryland's Project Basic is interested in exploring, and is in the process of developing, alternative ways for students to meet the graduation requirements outlined by the competencies, and in developing alternative ways for students who have met all other graduation requirements to pass the competencies even after leaving high school. The Project Basic Computer-Based Learning Laboratory, for example, is one avenue by which students who have left school may pass the competencies, and the Maryland External High School Diploma Program permits the attainment of an external diploma based on work-related experiences.

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MASSACHUSETTS

Minimum competency testing in Massachusetts was mandated in late 1978 by the State Board of Education in the form of a basic skills improvement program. The main purpose of the program is to aid students in achieving mastery of certain basic skills before graduation from high school. Graduation is not, however, contingent upon passing the basic skills test. Diagnosis and follow-up of learning problems constitute the major emphases of the program, and local district involvement and responsibility in the program implementation and maintenance is high. The State requires that student achievement of minimum standards in reading, writing, arithmetic, listening, and speaking be assessed at least once at each of three levels: early elementary (grades K-3), later elementary (grades 4-6), and secondary (grades 7-12). The first testing at the secondary level must occur no later than the ninth grade. The State has developed mandatory skills statements in all five mandated skill areas at the secondary level and optional tests in reading, writing, and arithmetic at the secondary level. The responsibilities of the local districts include: developing objectives and selecting or developing tests in all competency areas at the early and later elementary levels, setting minimum standards at all levels in all basic skill areas, determining specific grades to be tested and the testing schedule, administering the tests, revising regular instruction to ensure that the basic skills are mastered, evaluating the impact of the program, and reporting results to the State and the public at least once a year. All the testing programs in reading, arithmetic, and writing must be in operation at the local level by the fall of 1980; the testing programs in listening and speaking must be in operation by the fall of 1981.

Legislative and Policy History

The Willis-Harrington Act of 1965 (Summary of Acts, Chapter 15, Section 1G) gave the State Board of Education (SBE) the authority to mandate minimum standards for school courses. In the words of the State Legislature, "The Board shall establish minimum educational standards for all courses which public schools require their students to take." Ten years later, at the request of the Commissioner of Education, the Board acted on this authority and began a policy review of the need for minimum educational standards in Massachusetts. At this time, general public concern about basic skills achievement by students had risen, and the

State responded both to the current level of public concern and to a nationwide report that student achievement test scores and mastery of basic skills were declining. An ad hoc Advisory Committee on High School Graduation Requirements began functioning in March 1976 and was formally authorized by the Board in June 1977. It was the task of this committee to investigate and prepare recommendations "regarding the establishment of minimum standards of competency in certain basic skill areas to be achieved by students prior to graduation from high school" (SBE, 1978, p. 1).

On August 29, 1978, after approximately two and one-half years of public deliberation, the State Board of Education unanimously accepted the recommendations of the Advisory Committee and approved a policy to implement Basic Skills Improvement Programs throughout the state of Massachusetts. On January 23, 1979, the Board approved a set of regulations for the implementation of that policy, specifying:

- maximum local school district involvement;
- leadership and assistance in defining basic skills standards and providing for student achievement of these standards;
- emphasis on early diagnosis of learning needs so that all students can attain minimum standards prior to graduation.

The Advisory Committee on High School Graduation Requirements, now the Advisory Committee on Basic Skills Improvement, has continued to be a resource in such areas as defining basic skills and developing test specifications and standards. (For the complete text of the policy and regulations, see SBE, 1978 and 1979.)

Phase of implementation. The Board's implementation schedule requires each public school district to establish minimum standards and provisions for evaluating student achievement of minimum standards at three levels--early elementary, later elementary, and secondary--in three skill areas--mathematics, reading, and writing--by August 1, 1980. Minimum standards and provisions for evaluating student achievement in two additional areas--speaking and listening--must be established at the three levels by August 1, 1981.

During March and April 1979, prior to the mandated implementation dates, the Department assessed reading, writing, and mathematics achievement of a statewide sample of twelfth-grade students. Through this assessment, the Department both gathered baseline data on basic skills achievement of Massachusetts students, and field-tested the instrument they planned to offer as an optional test on the State basic skills improvement program.

Goals and Purposes

General goals. "The purpose of a basic skills competency program is to assist all students in achieving mastery of basic skills prior to high school graduation through the provision of appropriate curriculum, instruction, and evaluation" (SBE, 1978, p. 2). It is important to note that neither graduation nor grade promotion depends upon passing a test of basic skills. Secondary goals of the program include (1) the establishment of clear standards of achievement, evaluation, and reporting to the public; (2) the expectation that individual districts will take a careful look at their current instructional practices in light of these standards, since regular instructional programs should ensure student mastery of basic skills.

Specific purposes. Specific purposes of the program, then, include early diagnosis of student learning problems, curriculum modification as necessary to ensure learning of basic skills, and reporting test results to the public.

Competencies

Initially, basic life skills were the Advisory Committee's focus of concern, but as their investigation progressed, this focus broadened to include an emphasis on basic academic skills. The five competency areas mandated--reading, mathematics, writing, listening, and speaking--reflect the current mixture of emphasis on academic and life skills and were determined following public hearings and a public survey conducted by an outside agency (the Clark poll, October/November, 1978). The Advisory Committee on Basic Skills Improvement (formerly called the Advisory Committee on High School Graduation) then made recommendations to the Department and Board of Education, and these were approved.

In order to develop specific skill statements defining each broad competency area at the secondary level the Advisory Committee requested the establishment of two Task Forces--Mathematics and Communications. Members of the Task Force were teachers who were content specialists in the appropriate field, bilingual educators, guidance counselors, school administrators, and representatives of special projects and affiliated associations (e.g., Special Education Planning Project). The Communications Task Force was further divided into three committees--one for reading, one for writing, and one for listening and speaking.

Task Forces developed skills statements at the secondary level which were subsequently approved by the Department and adopted by the Board. Table 1 on the following page presents the subskills that were defined for each competency area. For the complete text of the objectives listed under each subskill, see the Regulations (SBE, 1979).

State interest and involvement in assessment at the secondary level stems primarily from a desire to respond to educators, administrators, students, parents, and the public with information on the quality of education in Massachusetts and the level of basic skills achievement by high school graduates.

At the early and later elementary levels, it is the responsibility of the local school districts to develop specific skills statements for each competency area. Because local districts are in the very early stages of implementing the Massachusetts basic skills policy, no examples of these statements are yet available.

Standards and Standard Setting

Setting minimum standards at all levels in each competency area is the reponsibility of local school districts. The Board defines minimum standards as "(a) the objectives in the basic skills and (b) the level of achievement for the objectives in the basic skills" (SBE, 1979, p. 1) and requires local districts only to report what standards are being set and the process used for setting them. To do this, local districts are required by the State to prepare "program plans" in each skill area at each level.

Program plans must include (1) a statement of the minimum standards established for each level; (2) a statement describing the participation of parents, teachers, administrators, employers, and the general public in the establishment of minimum standards and the overall program plans. The plan for the secondary level must also state how the secondary level skills statements developed by the State have been incorporated into the overall

TABLE 1

Subskills Defined for Each Competency Area at the Secondary Level

Reading

(a) Basic Word Meaning
(b) Literal Comprehension
(c) Interpretive Comprehension
(d) Evaluative Comprehension
(e) Locating Information

Writing

Given the opportunity to use a dictionary, students, through their own writing samples, will demonstrate:

(a) knowledge of the subject
(b) clear and consistent purpose
(c) organization
(d) an awareness of the intended reader
(e) precise word choices
(f) fulfillment of the purpose
(g) correct capitalization and punctuation
(h) correct spelling
(i) legible handwriting
(j) complete sentences
(k) standard use of nouns, pronouns, verbs, adjectives, and adverbs
(l) agreement of subject and verb

Listening

(a) Basic Listening Skills
(b) Understanding What You Hear
(c) Using What You Hear

TABLE 1 (continued)

Speaking

(a) Basic Oral Communication Skills
(b) Planning, Developing, and Stating Spoken Messages
(c) Common Uses of Spoken Messages

Mathematics

(a) Number and Numeration Concepts
(b) Arithmetic Computation
(c) Estimation and Approximation
(d) Measurement and Geometry
(e) Graphs and Tables
(f) Prediction of Events and Statistics

minimum standards. Program plans at all levels in reading, writing, and mathematics must be established by August 1, 1980 and made available to the public; in listening and speaking, program plans must be established and available by August 1, 1981 to the public. Only the secondary level plans must be submitted for State approval, by the dates already listed.

Target Groups and Testing Schedule

The State Board requires that student achievement of minimum standards be assessed at least once at each of three levels: early elementary (grades K-3), later elementary (grades 4-6), and secondary (grades 7-12). The first assessment of achievement at the secondary level must occur no later than grade 9, and opportunities for assessment must be provided once each year after the first assessment until students have achieved the minimum standards. Any secondary-level student who has demonstrated mastery in a basic skill need not be tested in that skill again. Student testing at all levels ascertains proficiency and also provides for diagnosis and remedy of learning needs and problems.

The selection of grades in which assessment is to occur (beyond the restriction described above), the determination of the testing schedule, and the procedure for assessment are left to the discretion of the local school districts.

The first opportunity for local districts to participate in an assessment of basic skills achievement occurred during the school year 1978-79. The State, in order to gather some benchmark statistics concerning achievement and to develop and field-test a state test of basic skills at the secondary level, contracted with National Evaluation Systems (NES) to conduct a statewide assessment. A total of 14,400 twelfth-graders, selected through a multi-stage random sampling procedure, participated in the assessment during March and April 1979. As part of this assessment, local districts outside the sample could opt to have the state tests administered to their students at the same time. The tests administered during this assessment are the tests that the Department now offers as an option to local districts in the basic skills improvement program.

Test Instruments

Assessment tests used at the elementary levels are entirely the responsibility of the local school districts. The State Board requires only that each district specify in its early- and later-elementary program plans which assessment instruments it plans to administer.

Instruments to assess secondary-level basic skills may be (1) tests developed by the State (mentioned earlier); (2) State-approved commercial tests; or (3) tests developed by the local districts themselves.

If the third option is chosen by a school district, it must submit for State approval a copy of the selected instruments, along with supporting technical information and an analysis demonstrating the content match between the instruments and the statements of skills developed by the State. Implementation Guide #1 specifies the content and technical criteria by which the State will evaluate and approve locally developed instruments.

Objective-referenced State tests (option #1)--titled the Massachusetts Assessment of Basic Skills, Form 1-- were prepared in mathematics, reading, and writing by National Evaluation Systems, which, as part of its development process, reviewed items and formats internally, screened the items for bias, and then submitted these items to the appropriate Task Forces of the Advisory Committee on Basic Skills Improvement for review. The reading test consisted of 55 multiple-choice items, the mathematics test, of 59 multiple-choice items, and the writing test, of two essay questions. Three equivalent forms of each test were developed and field tested in March-April 1979 with a sample of 400 twelfth-grade students assigned to each.

For option #2, the State Board developed and applied criteria for screening commercial standardized tests (see report prepared by the Public Affairs Research Institute, 1979). This resulted in State approval of a series of published tests in the areas of reading and mathematics. These are listed in Implementation Guide #1: Evaluating Basic Skills Achievement (April 1979). In this guide, the State also provides criteria by which a local district may evaluate a test that is not on the list for the probability of its approval. In their program plans, local districts may submit requests to use other commercial tests, but these must ultimately be approved by the Department of Education.

Test Administration

Local districts are responsible for the administration of all tests. They adopt their own schedules and are not required to report these in any way to the State.

Scoring and Analysis

As with test development and administration, the scoring of tests and analyses of test data are tasks for the local school districts. The types of scores reported, the time needed for data analysis and interpretation, and the type of analyses and interpretations performed, therefore, depend upon each school district. The State only requires that districts report annually to the Department of Education "the number and percentage of students by race, sex, and linguistic minority who have and have not achieved the minimum standards for each basic skill for the early elementary, later elementary, and secondary levels" (SBE, 1979, p. 10). The breakdown by race and linguistic minority is determined by each district.

Results of the statewide assessment were computed in terms of total test score, percentage of students correctly responding to each item, and percentages of correct response for items categorized by objective. Other analyses included score breakdowns by such variables as sex, race (black/white/other), linguistic minority (English/Spanish/Portuguese/Italian-Greek-Chinese/Other), socioeconomic status of the student, region of the state, and type of remediation offered in the school (special classes/remediation within regular classes).

Reporting/Dissemination

The residents of a given district make up the audience for the Annual Report which the State Board of Education requires from each district. Each public school district must make its report generally available and must ensure that the public is aware of its availability. It is for each district to determine how this will be done.

In addition to public access to Annual Reports, the State requires local districts to give each student and his/her parents the opportunity to review both the tests administered and the student's achievement record.

Again, local districts individually decide how this is to be done. The record is to include at least the student's corrected responses to the tests and becomes part of the student's temporary school record.

Other information to be made available to the general public includes the early and later-elementary and secondary-level program plans prepared by each public school district.

Use and Implications of Assessment Results

Consequences to students. Since the purpose of assessing achievement of basic skills in the early grades is primarily diagnosis, no contingencies are placed by the State on a student's passing or failing the tests. The State requires assurances from the local districts in their program plans that appropriate follow-up provisions have been made. Thus, if a student fails, local districts must provide for the modification of that student's regular instruction in order to ensure that he or she passes at a later testing opportunity. If a student has repeatedly failed to achieve minimum standards by grade 11, that student may be evaluated as to whether he or she qualifies as a student with special education needs and at that point the student may be referred to the regulations governing special education students.

Consequences to programs. The State Regulations require local districts to include in their program plans provisions for monitoring, evaluating, and modifying, as appropriate, both their programs and their current curricula. The program plans must also include plans for staff development activities, specifically in relation to implementation of basic skills improvement programs. While the State does not require that specific changes be made to programs or curricula, or even that any changes be made, one of its major goals is that local districts carefully monitor and review their instructional practices.

Provisions for Special Populations

The Policy on Basic Skills Improvement makes special provisions for (1) transfer students, (2) students in need of special education, and (3) students with limited competence in English.

Any student who transfers to a new district after having completed the tenth grade may be exempted from the annual reporting of basic skills test reports in that new district.

The Chapter 766 Regulations define a special education student as "a school age child who, because of temporary or more permanent adjustment difficulties or attributes arising from intellectual, sensory, emotional, or physical factors, cerebral dysfunctions, perceptual factors, or other specific learning disabilities or any combination thereof, is unable to progress effectively in a regular school program and requires special classes, instruction periods, or other special education services in order to successfully develop his individual educational potential." The evaluation teams who develop their Individual Education Plans will determine whether the students will be assessed for achievement of minimum standards. While the results of these assessments will be included on the students' individual plans, the scores may or may not, at the discretion of the evaluation teams, be included in the summary statistics of the public school district's Annual Report to the State.

Finally, students with limited competence in English are exempt from the regulations of the basic skills policy. The General Laws, Chapter 71A (define such students as either (1) children born outside the United States whose native language is not English and who are incapable of performing ordinary classwork in English, or (2) children born in the United States of non-English-speaking parents and who are incapable of performing ordinary classwork in English). Bilingual students who have completed a transitional bilingual education program, however, are considered as any other students.

Program Resources and Costs

General program staffing. In Massachusetts, the Commissioner of Education, the Board of Education, and the Bureau of Research and Assessment in the Department of Education have provided the leadership in responding to concerns about student achievement of basic skills. The Commissioner initiated the action that was taken, the Board and the Bureau directed the policy development activities, and the Board approved the Policy and Regulations.

The Bureau of Research and Assessment supervised the statewide assessment and is the primary resource for information regarding State educational policy and for technical advisory support in test administration. The Advisory Committee on Basic Skills Improvement has done the primary investigation into and formulation of the Policy on Basic Skills Improvement. Regional centers of the Department of Education review the local program plans, and the Commissioner approves secondary-level plans (early- and later-elementary program plans need not be formally approved). Local program staffing is handled entirely by the local public school districts.

Approximate costs. Since most of the responsibility for program development and administration lies with the local districts, cost figures will depend on the individual districts. At the state level, development costs--including monies for consulting, hearings, State test development, task forces, regulations, and dissemination--are expected to be approximately $170,000-$250,000 during each of the next two to three years.

Funding sources. Currently, funding for the State's involvement in basic skills programs is mainly through the state budget, included in Department of Education funds. No money, however, is earmarked from the State to local districts to support the local activities in basic skills improvement.

Program Evaluation

Program evaluation in Massachusetts is slated to occur at both the State and local levels. A preliminary investigation by the State into impacts of existing programs and of the newly approved Policy on Basic Skills Improvement took place during the 1978-79 Statewide Assessment. Both students and principals were surveyed as to their attitudes toward the requirements of basic skills and the current quality of education in Massachusetts public schools. Students were asked questions regarding school-related and out-of-school activities; principals were asked about the presence and purpose of special programs in their schools. In addition, general demographic data was collected not only to shed light on reactions to the Policy on Basic Skills Improvement and the need for such a policy, but also for stratification purposes by which to report student performance on the assessment. In that way, attitudinal and demographic variables may be related to student achievement of basic skill competency. A report of this investigation is in preparation and will soon be available.

At the local level, as previously mentioned, public school districts are required by the State to submit a plan for program monitoring and evaluation in their overall program plans. What the actual plan of the evaluation will be--whether formal or informal, what variables are to be studied, etc.--is a decision to be made by each public school district. Local districts are also responsible for funding their own evaluations.

Future Directions

While local districts will conduct their own program reviews and modify their own programs accordingly, the State has established the Advisory Committee on Basic Skills Improvement to handle matters related to the overall implementation of the Board of Education's Policy and Regulations on Basic Skills Improvement. The Advisory Committee will be comprised of no less than 25 members at any given time, with members appointed by the Board for two-year terms. Members will be public school teachers, school administrators, parents, students, representatives from special programs such as special education and bilingual education, and representatives from such organizations as the PTA, the Massachusetts Teachers' Association, and the Massachusetts Association for Secondary School Principals. One task of this committee is to submit an annual report, beginning in 1980, of implementation activities and policy recommendations. This will allow for a continual monitoring of the effects of the policy and regulations on different audiences.

State assessment tests in listening and speaking have yet to be developed, but these have been planned and are expected to be completed no later than 1981, available for use in that school year.

The State is investigating ways of coordinating its resources with the local school districts. A potential problem in the implementation of basic skills programs is the inability of small school districts to deal with technical aspects of implementation. Therefore, by providing technical resources, offering help in staff development activities, and preparing resource documents the State can offer assistance to the local districts.

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FITCHBURG, MASSACHUSETTS

The Fitchburg, Massachusetts Public School System is in the process of developing a testing program in response to a state mandate approved by the State Board of Education in August 1978. This mandate requires local districts to test students in the competency areas of mathematics, reading, writing, listening, and speaking, and to establish minimum levels of achievement in these subjects.

In addition to this state-mandated program, Fitchburg has also been developing and implementing a competency-based testing program known as Skill Achievement Monitoring (SAM) in mathematics, vocabulary, and writing. This testing program focuses on a wide range of skills, not just minimum skills. Since the introduction of the achievement monitoring system in 1974, teachers and administrators have collaborated in the design of test instruments, and results are used only by teachers in planning instruction. Student performance on SAM tests is not tied to promotion or graduation.

Legislative and Policy History

Policy history. In August 1978 the Massachusetts State Board of Education approved a policy to implement Basic Skills Improvement Programs throughout the State. Each public school district is required to establish minimum standards and to make provisions for evaluating student achievement of these standards at three levels--early and later elementary and secondary--in three skill areas by August 1, 1980. Minimum standards in two additional areas--speaking and listening--must be established for each level by August 1, 1981.

Since 1974, however, the Fitchburg school system has been developing and implementing its own competency-based testing program. Interest in basic skills on the part of the Superintendent and the School Committee in basic skills led the Superintendent to submit a request for funds to develop a system to monitor student achievement of selected mathematics objectives in the fourth, fifth, and sixth grades.

With the approval of the School Committee, the School Department contracted with an outside agency to help design and implement this program. The agency was responsible for analyzing student performance and providing reports on test results. At the same time, the School Department contracted with the Center for Field Research and School Services at Boston Colleges to evaluate program impact upon teachers and students and to provide information concerning the advisability of expanding, modifying, or terminating the program. The School Department assumed responsibility for developing test materials and coordinating program implementation.

During the 1974-75 school year 20 teachers from the fourth, fifth, and sixth grades and approximately 500 students participated in the pilot test of Project CAM (Comprehensive Achievement Monitoring). Both teachers and students were interviewed by the evaluation specialist during and at the close of the school year. At the conclusion of the pilot test, the decision was made to continue competency testing in mathematics, but to develop a program that could be administered and maintained without the assistance of an outside agency. Consequently, SAM (Skill Achievement Monitoring) was introduced in the following year (1975-76), and all fourth-, fifth-, and sixth-grade mathematics teachers participated in the project during that year (1975-76). In the 1976-77 and 1977-78 school years, the project was expanded to include second-, third-, and seventh-grade mathematics classes. In the 1978-79 school year, SAM was used in all mathematics classes for grades 2-8 throughout the school system.

SAM tests and SAM rating checklists have also been developed to track student achievement in vocabulary and writing, respectively. SAM is being used in conjunction with a Vocabulary Improvement Program, McGraw Hill's "Plus 10," in grades 4-6, and SAM rating checklists for writing were field-tested in the 1978-79 school year in the fourth, fifth, sixth, and tenth grades. A revised SAM-Writing and a new SAM-Mechanics/Usage will be introduced at the primary, intermediate, junior high, and senior high levels during the 1979-80 school year.

Phase of implementation. Fitchburg is implementing the State mandate through the development of "checkpoint tests." These tests will be given in grades 3, 6, and 9 in the skill areas of mathematics, reading, writing, listening, and speaking. The checkpoint tests in mathematics and writing were developed during the 1978-79 school year. Checkpoint tests for reading will be completed during the 1979-80 school year. These tests for mathematics, reading, and writing will be instituted in Spring, 1980. Checkpoint tests for listening and speaking skills are being prepared for use in Spring, 1981.

SAM tests in mathematics are currently used in grades 2-8, while SAM tests in vocabulary are given in grades 4-6. SAM tests in writing were field-tested in the 1978-79 school year in the fourth, fifth, sixth, and tenth grades.

Goals and Purposes

General goals. The Fitchburg School System used both the checkpoint and SAM tests to ensure that students master the basic skills.

Specific purposes. The two testing programs differ in terms of the specific ends they are designed to accomplish. The primary goal of the checkpoint tests is to insure that students experiencing major difficulty in learning the basic skills of reading, writing, mathematics, speaking, and listening are identified, and that the resources necessary to help those students are provided. Results of these tests will be used, in conjunction with other data supplied by teachers, to plan remedial instruction.

The primary purpose of SAM is to focus instructional attention on specific skills in the basic skill areas so that all students will be challenged to learn far more than minimum skills. SAM helps improve skill mastery for all students, not just those students in academic jeopardy. SAM accomplishes this by providing regular feedback to teachers, students, and parents on students' mastery of specific objectives taught in the classroom. Teachers use the results of SAM tests for diagnosing learning needs and providing instructional resources.

Competencies

Checkpoint tests. The checkpoint tests will assess students' achievement in those areas mandated by the State: mathematics, reading, writing, listening, and speaking. Under the policy adopted by the State Board of Education in August 1978, local districts are charged with the following tasks:

(1) to incorporate skill statements developed by State-level task forces in the competency areas for the secondary-level tests with locally-developed objectives;

(2) to develop objectives for both the early and later elementary assessments in the designated competency areas.

For a complete text of the objectives developed for the secondary-level tests by the task forces, see the Regulations (SBE, 1979).

In Fitchburg, the task of preparing objectives for each area and level was accomplished during the 1978-79 school year by committees of teachers at each level. A Skills Committee was formed at the early and later elementary levels; at the secondary level, committees were formed for each of the first three competency areas mandated by the State--reading, writing, and mathematics. Committees for listening and speaking will be established in 1980.

During the 1978-79 school year, these committees prepared preliminary lists of minimum skills. These statements have been reviewed by teachers and administrators, but must be submitted to the community for approval. Administrators anticipate that the final list of skills will be developed during the 1979-80 school year. Drafts of the statements prepared to date may be obtained by writing to the designated contact person. For examples of draft checkpoint objectives in mathematics and writing for grades 3, 6, and 9, see Table 1.

SAM. Objectives for the SAM tests in mathematics were originally selected during the 1974-75 school year. Twenty fourth-, fifth-, and sixth-grade teachers volunteer to participate in the development of the Comprehensive Achievement Monitoring System, the forerunner of the Skill Achievement Monitoring System introduced the following year. From the objectives of the Individualized Mathematics Program (IMP), a commercially available mathematics curriculum, these teachers selected approximately twenty-five objectives covering the three major areas of instruction for each of the three grade levels.. SAM-math is currently used in grades 2-8 in Fitchburg. The number of objectives tested ranges from 18 to 19, depending upon the grade level.

Objectives for the SAM tests in vocabulary were developed following the pilot test year. During the 1978-79 school year, skill statements in writing and assessment techniques were field-tested. No comprehensive list of objectives in these areas is available. For examples of objectives for the SAM tests in mathematics for grades 2, 4, and 8, and in writing for grades 4, 6, and 10, see Table 1.

TABLE 1

Examples of Objectives for SAM and Checkpoint Tests in Selected Competency Areas at Various Grade Levels

CHECKPOINT TESTS

Mathematics	
Grade 3	Subtracts one three-digit whole number from another three-digit whole number without regrouping.
Grade 6	Multiplies two three-digit whole numbers.
Grade 9	Uses the average for one period of time to estimate total income or expenses for a longer period of time.
Writing	
Grade 3	First word in sentence capitalized.
Grade 6	Consistent use of complete sentences.
Grade 9	Agreement of subject and predicate.

TABLE 1 (continued)

SAM TESTS

Mathematics

Grade 2	Given two two-digit numbers, the student will add them correctly.
Grade 4	Given three three-digit whole numbers, the student will add them correctly.
Grade 8	Given the base and altitude of a triangle, the student must determine the area of the triangle.

Writing

Grade 4	Expands written sentences with words and phrases that provide sensory detail.
Grade 6	Uses transitions between sentences.
Grade 10	Writes sentences with proper coordination, subordination, and parallel structure.

Standards and Standard Setting

When compared with respect to standards, clear differences between the check point and the SAM tests emerge. These will be discussed separately below.

Checkpoint tests. Since the checkpoint tests are being developed to meet State requirements, minimum standards must be set for them. The state has defined minimum standards as

(a) the objectives in the basic skills and

(b) the level of achievement for the objectives in the basic skills (SBE, 1979, p. 1.),

and has developed specifications for each competency area tested at the secondary level.

Although the State has prepared objectives for the secondary-level tests, local districts are responsible for setting minimum levels of achievement for the secondary-level test and for the early and later elementary assessments. In Fitchburg, the committees responsible for developing the objectives will also set the standard during the 1979-80 school year.

SAM. In contrast, no standards linking student achievement levels to specific outcomes (e.g., promotion, remediation) are used in conjunction with SAM. Moreover, there is no formal policy on how teachers are to use the results of the SAM tests. These results are reported only to teachers, students, and parents and are used by teachers in conjunction with their own judgment in planning instruction. In cases where there are discrepancies between test results and teacher judgment, the latter has greater weight.

Target Groups and Testing Schedule

Differences also exist between the checkpoint and SAM tests in terms of the grades assessed and testing schedules. These differences, along with the rationale for the grades assessed and the testing schedule, are discussed below.

Both the choice of grades to be assessed and the testing schedule for the checkpoint tests conform to the State mandate for competency testing. Specifically, the State requires that local districts test at least once at the early elementary (K-3), later elementary (4-6), and secondary (7-12) levels. Moreover, it is mandated that at the secondary level the local district must test no later than the ninth grade and must provide assessment opportunities at least once each year after the ninth grade until the student has achieved the minimum standards. Fitchburg will administer the checkpoint tests in the designated areas to third-, sixth-, and ninth-graders. The mathematics and reading tests will be administered in the spring. While the writing test will also be given in the third, sixth, and ninth grades, Fitchburg anticipates offering students multiple opportunities to take the writing test.

SAM. Currently SAM-Math is used in grades 2-8 in all Fitchburg schools. SAM is also used in conjunction with a Vocabulary Improvement Program (SAM-VIP) in grades 4-6, and SAM tests in writing were field-tested in grades 4, 5, 6, and 10 during the 1978-79 school year.

SAM-Math was tried out during the 1974-75 and 1975-76 school years in the fourth, fifth, and sixth grades. The choice of grades for the field tests was based in part on the interest of intermediate-level teachers in skill achievement monitoring. Similarly with vocabulary and writing, the decision to develop SAM tests for use at particular grade levels was in part prompted by the interests and needs of particular teachers.

SAM-Math is administered every six weeks to every student in grades 2-8, and SAM-VIP will be given at seven-week intervals to every student in grades 4-6 once test revisions are complete. SAM tests in writing are being field-tested at six-week intervals, but a final decision on the testing schedule has not been made.

The rationale behind testing at six- or eight-week intervals is as follows: each administration not only provides information on how well students retain objectives previously taught, but also pretests on the remaining objectives. For example, in mathematics, each test form contains from 18-29 items, each item corresponding to one of the objectives that comprise the material covered at a particular level. Based on these results, teachers can decide how to allot instructional time and resources for helping students master and retain these objectives.

Test Instruments

Both the checkpoint and SAM tests were developed by teachers and administrators, and thus are designed specifically for the Fitchburg curriculum.

Checkpoint tests. The checkpoint tests for grades 3, 6, and 9 are being developed in Fitchburg through the cooperation of teachers and the evaluation specialists. The district is required by State regulations, however, to submit to the State Board of Education copies of the secondary-level tests, supporting technical information, and an analysis demonstrating the content match between the instruments and the secondary-level test specifications developed by the State. This information, along with other details (e.g., grades assessed) relating to basic skills assessment in the areas of mathematics, reading, and writing at the secondary level, must be submitted no earlier than February 1, 1980, and no later than August 1, 1980.

SAM. During the 1974-75 pilot test year, 20 fourth-, fifth-, and sixth-grade teachers volunteered to participate in the development of the Comprehensive Achievement Monitoring system. The Individualized Mathematics Program, with 69 objectives, was the source from which these teachers selected 20 objectives covering the major areas of instruction for each of the three grade levels. Six equivalent forms were written for each grade level; there was one item per objective included in each form, and every form had equivalent items. Approximately 500 students in the fourth, fifth, and sixth grades were involved in the pilot tests.

Results of the evaluation of the CAM system led to expansion of Fitchburg's role in test development. The decisions to develop a testing program administered without the assistance of an outside contractor and to use SAM in teaching vocabulary and writing have had the result that teachers now play a major role in the identification and selection of objectives and in item writing. Responsibility for supervising and coordinating these activities has been assumed by the Evaluation Specialist.

Test Administration

Checkpoint tests. Procedures for distributing and administering the checkpoint tests will be developed during the 1979-80 school year.

SAM. SAM tests are administered by teachers in the classroom. The mode of test administration may vary at the discretion of the teachers. (For example, a teacher may read the test in Spanish to a student.) Tests are distributed on Wednesdays and may be administered any time from the next day to the following Tuesday. Since tests are collected on Wednesday afternoons, SAM is typically given on Tuesday, with absent students taking it on Wednesday morning. Test results are returned to teachers on the following Monday. Irregularities such as absences are handled on an individual basis by the teacher.

Scoring and Analysis

Checkpoint tests. While the scoring methods for the checkpoint tests remain to be determined, it should be noted that the State requires each local school district to report to the Board of Education and the public the number and percentage of students by race, sex, and linguistic minority who have and have not achieved the minimum standards for each competency area. The State also requires that, following the assessment, the school district must provide the student and his/her parents with an opportunity to review the tests and a record of the student's achievement level. The student's assessment performance must also be "maintained as part of the student's temporary record pursuant to the Student Records Regulations as adopted by the Board of Education" (SBE, 1979, p. 7).

SAM. Responses to SAM test questions are keypunched and computer analyzed with the school district's computer facilities. Each student receives a report which lists each objective and indicates whether the student answered correctly or incorrectly. Teachers receive a report listing the following: each student's name, the objectives the student answered correctly, the objectives he or she answered incorrectly, and the total number of students answering each objective incorrectly.

Provisions for Special Populations

Checkpoint tests. The State Policy on Basic Skills Improvement makes special provisions for three populations: some transfer students, students in need of special education, and students with limited proficiency in English. Formal procedures for incorporating these provisions into the administration of checkpoint tests and the reporting of test results remain to be determined by Fitchburg school administrators.

SAM. Decisions regarding the use of SAM with members of special populations are made on an individual basis by teachers.

Use and Implications of Test Results

Consequences to students. The tests that assess basic skills must be used in conjunction with specified levels of achievement, although the State does not prescribe either the levels of achievement or the consequences for not meeting these levels. In addition to implementing such tests and setting standards for achievement, the local district must also ensure that appropriate follow-up provisions for failures exist. Fitchburg is currently developing such provisions and standards to be implemented in conjunction with the checkpoint tests.

Since teachers are assigned full responsibility for using the results of SAM, no formal guidelines linking student performance on the tests to specific consequences (e.g., promotion, remediation) exist. In practice, teachers may use SAM in deciding to assign a student extra work on specific objectives. SAM results may enter into a decision about whether or not to promote a student. Nonetheless, as the Evaluation Specialist has pointed out, such major decisions as promotion are always based upon multiple measures of student progress rather than on one critical measure.

Consequences to programs. Still in the process of development, the checkpoint tests have as yet had no impact upon the instructional programs.

Fitchburg administrators have noted the following kinds of program changes stemming from the introduction of SAM-Math tests:

(1) "Teachers are drilling students more on the basic operations in arithmetic . . . ,

(2) teachers have made and shared with colleagues instructional materials designed to promote pupil mastery of skills, (and)

(3) teachers group students in their classes by skill level in order to facilitate instruction geared to specific levels and specific objectives" (Wallace & Reidy, 1978, p. 7).

Also, since mathematics objectives were selected from those identified in a commercially available mathematics curriculum which includes specific exercises for each objective, students who are having difficulty mastering specific objectives tested by SAM can go to these materials for additional drills and exercises.

The impact of SAM in the areas of vocabulary and writing will be systematically documented in 1979-80. Preliminary documentation indicates more time is devoted to vocabulary building activities and that students are writing more throughout the school system. At the high school the English program has been completely revised to focus on the teaching of writing.

Program Resources and Costs

General program staffing. In the 1975-76 school year the position of Evaluation Specialist was created. This person is responsible for the supervision of all test- and assessment-related activities in the school district, including the development of the checkpoint tests. In addition, a project assistant and a full-time secretary provide staff assistance in these activities.

The Evaluation Specialist also has responsibility for development, implementation, and administration of the Skill Achievement Monitoring system. Prior to the hiring of the Evaluation Specialist, two coordinators assumed, in addition to their other school-related duties, the administrative tasks connected with the monitoring system.

It is anticipated that any remediation required as a result of student performance on checkpoint tests will be handled by existing staff members. With respect to SAM, responsibility for its use rests with teachers.

Approximate costs. There are no estimates available on the costs of developing the checkpoint tests. During the 1974-75 year of CAM approximately $10,000 was spent. Major costs during this year consisted of the contracts awarded to the external educational firm ($7,500) and to the Evaluation Specialist ($2,500).

In 1975-76 the school system budgeted $5,000 for the development of the SAM program and related activities, and hired a full-time Evaluation Specialist. Funds for the third year of operation (1976-77) came both from Fitchburg and from the federal government under Title IV-C. Fitchburg received approximately $103,000 over the 1976-77, 1977-78, and 1978-79 school years under this grant in order to develop the SAM system and related curriculum materials, and to disseminate information on its program throughout Massachusetts. These activities are collectively known as Project Competency, which was the name of the proposal submitted for Title IV-C funding. Fitchburg has been incorporating the costs of SAM into its budget and will be wholly responsible for program funding after the termination of the grant. The cost of SAM-Math is estimated to be $1.60 per student per year.

Funding sources. Development of the checkpoint tests is funded under Project Development and Evaluation portion of the school budget. Support for the initial development of CAM and SAM came from Project Development and Evaluation funds in the school budget. In the third year of operation (1976-77), Fitchburg received a three-year grant under Title IV-C. Development of the checkpoint tests is also being funded under the Project Development and Evaluation portion of the school budget.

Program Evaluation

Fitchburg administrators plan to monitor the introduction of the checkpoint testing program. Extensive baseline data have already been gathered to serve as benchmarks for future comparisons of student achievement.

The administration has also provided the impetus for evaluating the Skill Achievement Monitoring system. Both formal evaluations by outside contractors and informal assessments of reactions to SAM among teachers and students have been conducted. In addition, administrators have made preliminary attempts to validate SAM using commercially available test instruments.

Formal evaluations have focused on the reactions of teachers and students to the CAM system and on how teachers are using SAM tests in the classroom. During the pilot test year Fitchburg contracted with an outside Evaluation Specialist, who interviewed all of the teachers and a sample of 80 students (approximately 500 students participated in the CAM program) regarding their perceptions of CAM. In addition, the sixth form of CAM for grades 4, 5, and 6 was administered to students in both CAM and non-CAM classrooms. Both students and teachers were favorably impressed with CAM, and offered suggestions for improving the system. No significant differences in the mean achievement scores of CAM and non-CAM groups were found. The final report submitted in May 1977 recommended that Fitchburg explore the possibility of developing complete capabilities to administer its own monitoring system.

A second evaluation, conducted in Spring 1978 by the Research and Development Center for Teacher Education at the University of Texas, found that teachers were using SAM in a variety of ways, and that potential for further staff development in the use of SAM existed. In addition to these efforts, school administrators have informally solicited the reactions of students and teachers.

A preliminary validation study of SAM was conducted by the Fitchburg Evaluation Specialist in May 1977 and spring 1978. The arithmetic skills subtest of the Science Research Associates Basic Skills Test was administered to 100 low-achieving seventh-grade students who had just completed SAM for grade-level six (one year later than usual). Ninety-five percent (95%) of this group scored at or above grade level (7.8) on the SRA subtest. In spring of 1978 the Comprehensive Test of Basic Skills was administered to a random sample of third- and sixth-grade students; 92% of the third-graders and 75% of the sixth-graders scored at or above grade level on the CTBS.

In August 1978 the Fitchburg School Department applied to the Massachusetts Department of Education for the Validation of Project Competency as a model educational program. After a written presentation of statistical data on the program's effectiveness and an on-site visit by a validation team comprised of a university researcher, a public school researcher, and a curriculum administrator, Project Competency was successfully validated. Accordingly, Fitchburg was awarded a diffusion grant (Title IV-C, ESEA) for the 1979-80 school year to help other Massachusetts communities adopt its competency program.

Future Directions

The major changes in Fitchburg's program occurred after the pilot test year of 1974-75, with the transition to a locally based and maintained monitoring system. The addition of the checkpoint tests is seen primarily as a response to State requirements that local districts test at certain levels in specific competencies. Future plans include the possibility of expanding SAM to include all of the State-mandated competencies, and of specifying the relationships between performance on the SAM and checkpoint tests. If performance on the SAM tests can be used as an index of basic skills achievement in the designated competency areas, it may be possible to entirely phase out the checkpoint tests.

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MICHIGAN

Minimum competency testing in Michigan was mandated by the State legislature in 1969, following a State Board of Education proposal for a statewide minimum competency testing program. For purposes of comparability, this statewide assessment program will hereafter be called a "minimum competency testing program," although it is not referred to as such within Michigan. While the resulting Michigan Educational Assessment Program (MEAP) expects to develop minimum competency tests in many subject areas, the main purpose of the existing program is to help students achieve mastery of basic skills in reading and mathematics before they enter high school. The reading and mathematics tests are therefore administered to all fourth-, seventh-, and tenth-graders, and testing occurs in the fall of each year. The law requires the Department of Education to provide remedial assistance programs, and, to that end, the State allocates money for remedial work and encourages the local school districts to develop their own remedial programs. MEAP is controlled by the State Board of Education. A Director and a Supervisor in the Department of Education are responsible for administration of the minimum competency testing program. They manage a staff of assessment specialists who work with committees of teachers, content specialists, and advisory groups to develop and review the performance objectives and items. Minimum competency tests are not linked with promotion.

Legislative and Policy History

Policy history. In 1964 the State of Michigan adopted a new constitution which set up an elected State Board of Education. During its first year the elected Board focused on measures of educational output as one of several major areas of concern. In 1969 the Board, with the technical assistance of the Department of Education, proposed a statewide testing program.

The State legislature adopted the concept of competency testing in 1976, and required, in Act 307 (the Department's budget bill for 1969-70), that the testing program be instituted in four months. The Board of Education brought in an outside contractor to assist in the design of the Michigan Educational Assessment Program and to administer the test in January 1970.

The first test that was administered in the MEAP program was a norm-referenced examination in reading, mathematics, mechanics of written expression, word relationships, and attitudinal measures, which was given to fourth- and seventh-graders. The items on this test were taken from an existing testing battery and were administered in a matrix sampling approach in which each student took only part of the test battery. Therefore, student results were not reported individually by student.

In 1970, the Michigan State legislature passed Act 38, which required that every pupil in grades 4 and 7 be tested and individual pupil reports be made. Act 38 superseded Act 307 as the legislative authority for the statewide testing program. Act 38 stated that the statewide program was to:

(1) set student achievement goals in the basic skills (reading, mathematics, language arts, and/or other general subject areas) and identify the students most deficient in these skills;

(2) provide information to assist the State in allocating funds and professional services so as to provide equal educational opportunities for all its students;

(3) provide school systems with strong incentives to introduce educational programs to improve student achievement in the basic skills and model programs to raise the level of achievement of students;

(4) develop a system of continuous program evaluation in order to help each school discover and introduce program changes most likely to improve the quality of education;

(5) provide the public periodically with information about the progress of the State educational system.

This legislation instituted testing of every student (census testing), with all items, which was funded directly by the State. Individual student scores and average scores for school districts were released to school districts during the following school year. The public release of school and district rankings in February 1972 generated extensive discussion about the appropriateness of the norm-referenced approach to testing.

The State Board of Education made a decision in 1972 to change MEAP fundamentally in the 1973-74 school year. Objective-referenced tests, which measure attainment of specific learning objectives, replaced norm-referenced tests, which determine an individual's relative achievement in a skill area. The Board also decided to have Michigan educators prepare the performance objectives and test materials.

The objective-referenced tests prepared by Michigan educators were administered in reading and mathematics in the fourth and seventh grades in 1973-74. Promotion was not tied to passing the tests.

Phase of implementation. The assessment of every fourth- and seventh-grader in reading and mathematics is mandated and this program has been fully implemented.

The State has initiated other test development activities for different subject areas at other grade levels, as follows:

(1) Tests have been developed for first-graders, and a pilot test has been administered. However, first-grade testing has been dropped because of the need to improve the materials and the lack of funding.

(2) Extensive testing of tenth-grade students in reading and mathematics took place in 1974-78 on a voluntary basis. In 1978, two-thirds of the schools in the State participated in this effort. Legislative funds were requested for this program, and funding has been granted for 1979. All tenth-graders will participate beginning in the fall of 1979.

(3) High school tests are in the final stage of development. A preliminary set of life role competencies has been developed and has been extensively reviewed. Test items for the competencies, which can be measured in pencil-and-paper mode, have been written and given a field tryout.

(4) Prototype tests have also been developed in science (with laboratory performance), health, art (with drawing samples), music (with performance on a musical instrument), social studies (with small group discussions), writing (with writing samples), and listening (with audio-taped stimulus materials).

Again, it should be emphasized that only the census tests in reading and mathematics for fourth-, seventh-, and tenth-graders are mandated. Testing in other subject areas is done through matrix sampling. Both census and sample testing is supported at State expense. Local districts may test at other grade levels and with other tests at their own expense.

Goals and Purposes

General goals. The Department of Education states that the general goals of the program are to collect and make available information about the levels of student achievement in the basic skills in order to improve educational decision making.

Specific purposes. The Department of Education has set the following specific objectives for MEAP:

(1) to provide statewide information on the current levels of student achievement in the basic skills;

(2) to provide statewide information on progress in levels of student achievement in the basic skills over a period of time;

(3) to provide information about areas of success and areas of need that can assist in the allocation of state-level resources so as to ensure student achievement of minimum levels in the basic skills;

(4) to identify those schools with large numbers of students who are deficient in the basic skills and to initiate local action to correct and prevent those deficiencies;

(5) to provide information to local school districts to help them:

  (a) describe the current status of student achievement of minimum levels in the basic skills;

  (b) describe student progress in achieving these minimum levels over a period of time; and

  (c) identify district, school, classroom, and individual pupil areas of success and areas of need so that the local districts can analyze their own programs and reallocate their own resources as appropriate to ensure student achievement of these minimum levels;

(6) to provide technical assistance and support to local districts in developing and implementing their own needs assessment programs;

(7) to establish standards and tests for assessing the level of individual student achievement in the basic skills;

(8) to increase the usefulness of the assessment data by actively promoting its dissemination and utilization to all concerned audiences and specifically, parents;

(9) to provide the Board of Education with an annual systematic account of the policies and procedures of the Michigan Educational Assessment Program, including input from the Research, Evaluation, and Assessment Services (REAS) Advisory Council and other appropriate advisory groups.

Competencies

The Department developed two related sets of performance objectives (competencies) for MEAP. One set includes the official competencies which are the basis for the present mandated testing program, and the other set is a broader one which encompasses the first. The broader set includes competencies which the State considers minimum requirements within each subject.

In developing the competencies, the Department made three decisions. First, they considered the competencies to be minimum levels of achievement which almost all students should attain before the time set for assessment. In other words, grade 4 students should have acquired the competencies of grades K-3, or at least have the opportunity to learn these competencies soon after testing. (The tests are administered in September-October.)

Second, the Department of Education considers the competencies to be closely related to academic or school skills; the competencies therefore derive from the types of skills a student is expected to learn in a classroom. In their recent revision of test items, the Department has, however, begun to develop items which assess the academic skills using life-related contexts.

Competencies, called "minimum performance objectives" are available for the following skill areas and grade levels:

GRADE 1:

1) Affective
2) Cognitive
3) Psychomotor
4) Social-emotional

GRADES 4, 7, AND 10:

1) Art
2) Communication Skills
3) Health Education
4) Mathematics
5) Music
6) Physical Education
7) Science
8) Social Studies
9) Career Development
10) Interpersonal and Social Responsibilities

GRADE 12 (Life Role Competencies):

1) Aesthetic--Humanistic Appreciation
2) Civic and Social Responsibility
3) Employment Skills
4) Personal and Family Management

The Department has published a series of booklets which describe fully the official and complete sets of competencies within each skill area. The competencies, which have provided the basis for the reading and mathematics test items for MEAP, are a subset of the complete set of "minimum performance objectives" for their respective subjects, and have been systematically selected and subjected to extensive review. These objectives make up the official competencies in which every fourth- and seventh-grade pupil is tested. Table 1 lists the specific skill areas within reading and mathematics that are tested at each grade level.

The process for developing the objectives in each skill area was as follows. In 1971-72 the Superintendent requested the Department to develop a set of minimum competencies. The Department's instructional specialists, a separate unit from the Program staff, worked with school district and university specialists in each skill area to develop a first draft of materials. The Superintendent and the coordinators went to both

TABLE 1

Skill Areas Tested by MEAP

Reading (every pupil)

GRADES 4, 7, and 10:

Vocabulary Meaning
Literal Comprehension
Inferential Comprehension
Study Skills

Mathematics (every pupil)

GRADE 4:

Pre-Number
Numeration
Whole Number Addition
   and Subtraction
Non-Geometric Measurement

GRADE 10:

Non-Geometric Measurement
Whole Number Division
Fractions
Decimals
Ratio, Proportion, and Percent
Geometry
Algebra
Integers
Geometric Measurement
Probability and Statistics

GRADE 7:

Numeration
Whole Number Addition
   and Subtraction
Whole Number Multiplication
Whole Number Division
Fractions
Decimals
Ratio and Proportion
Measurement
Geometry
Algebra
Metric

TABLE 1 (continued)

Skill Areas Tested by Sampling Have Included:

Science
Social Studies
Art
Music
Health
Career Development
Listening (Communication Skills)

school and curriculum area educational associations and asked them to participate in the development activities by nominating representatives to serve on specific committees.

Specialists in each curriculum area from public schools and universities were asked to define what every pupil should know and be able to do in the curriculum area. After the specialists defined the knowledge and skills they thought were essential, committees of generalists were established in each skill area. Each committee was composed of about 12 people nominated by teacher, administrator, and citizen organizations. Each committee consisted of teachers, principals, central office staff, curriculum specialists, school board members, and parents. These committees were responsible for refining and selecting the objectives to be used in competency testing. Their list of objectives has been revised and changed slightly as the statewide assessment program has developed, since the initial selection was made solely on the basis of the committee members' judgment. Revisions, however, have made use of both professional judgments and the assessment data gathered in subsequent years.

Standards and Standard Setting

Standards are set to identify schools with relatively large numbers of students performing below minimum competency levels. To be considered "competent," (or, in MEAP's terminology, "at an acceptable level") a student must correctly answer four out of five test items measuring each objective and then pass 75% of the objectives.

The Department adopted a cutoff score of 75% because it is a standard passing grade which the public would recognize and understand. The standard was reviewed by a committee of approximately 25 psychometricians and by a committee of approximately 60 curriculum specialists. Both groups accepted the standard as a strategy for simplifying communication with lay groups, and did not offer any alternative means for setting a cutoff score.

School standards or the overall performance of the students in any particular school are also set. The following needs criteria have been adopted by the State Board of Education:

High-Needs School

Fewer than 50% of the students attained 75% or more of the objectives for two out of three years.

Moderate-Needs School

50-74% of the students attained 75% or more of the objectives.

Low Needs-School

75% or more of the students attained 75% or more of the objectives.

Improving School

There has been in increase of 5% or more of the number of students from 75%-100% category, and there has been a decrease of 5% in the number of students attaining less than 25% of the objectives, and the percent of students obtaining 75%-100% of the objectives was no lower in Year 2 than in Year 1, and the percent of students who obtained less than 25% of the objectives was no higher in Year 2 than in Year 1.*

Declining School

There has been a decrease of 5% or more of the number of students from 75%-100% category, or there has been an increase of 5% in the number of students attaining less than 25% of the objectives, or the percent of students obtaining 75%-100% of the objectives was no higher in Year 2 than in Year 1, or the percent of students who obtained less than 25% of the objectives was no lower in Year 2 than in Year 1.

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* If percent of students who attained less than 25% of the objectives has been below 5% since Year 1, an improving school is identified by an increase of 5% or more in the percentages of students attaining 75%-100% of the objectives.

Stable School

Any school not categorized as improving or declining is "stable."

Status Uncertain

The school does not fit any one category for two out of the three years.

Insufficient Data

Only one year's data or no data available.

According to the outcome of the needs criteria summary, the State distributes funds ($250 per failing student) to districts in which more than 15% of the total student enrollment have attained fewer than 40% of the reading and mathematics objectives.

Target Groups and Testing Schedule

By State law, every fourth- and seventh-grade pupil must be assessed in reading and mathematics. Certain special education students may be exempted from this requirement. The grades selected for testing are those considered to be key transition points in a student's educational career. The fourth grade represents a transition from the primary to the elementary level; the seventh grade represents a transition from the elementary to the middle school level; and the tenth grade represents a transition from middle school to secondary school (from basic skills mastery to application of the skills). Tests are administered immediately after the student has passed through the transition point (in the fall of each school year) to determine whether the student has in fact attained all of the expected minimum objectives.

The tests are administered in the fall of each year. The testing has been set for the beginning of the school year for this primary reason: to permit necessary remedial activities to take place during the same school year, immediately after testing.

Tests to measure competencies from other skill areas are planned for the future. For example: in the fall of 1979, tests will be administered in Health, Career Development, and Listening to a sampling of fourth-, seventh-, and tenth-graders.

Test Instruments

During the first four years of the Michigan Educational Assessment Program, the achievement tests were norm-referenced, survey tests. They were designed to rank students, schools, and school districts from highest to lowest in broad subject areas, such as reading. All students were not expected to finish or obtain high scores within the allotted time interval. Since the resulting scores showed only how a student ranked against peers, and not what the student did or did not know, the test provided no information on which to base remedial instructional activities.

Therefore, beginning in 1973, objective-referenced tests written and validated by Michigan educators were adopted for use in the educational assessment program. The tests are multiple-choice, pencil-and-paper examinations. There are five multiple-choice items per objective in both reading and mathematics at each of the grade levels--4 and 7.

Each year, the MEAP assessment specialists and committees review and select those objectives and test items to be used that year on the test. Objectives are selected from a complete set of minimum performance objectives published by the Michigan Department of Education. Item selection is made from a bank originally developed, reviewed, and validated by Michigan teachers, and edited by an outside contractor. In general, three-fourths of the test items are retained from year to year, and the others are replaced by items of comparable difficulty and content. The same set of objectives has been used since 1973. A member of the Department staff reviews the restructured tests each year for bias, using guidelines of the type established by the Macmillan Publishing Company for printed tests for public schools. Tests are reviewed for possible bias in connection with sex, ethnicity, age, handicaps, and regional differences.

Test Administration

Tests are administered by local school district personnel (usually teachers or counselors) in the fall over a one-month period. This time frame includes a one-week makeup period. Questions of exclusion and absenteeism/makeup are handled by local districts. Parental permission is not necessary, but a student whose parent objects can be excluded from the testing.

A practice test to be administered at least one day in advance of the actual assessment has been designed for fourth-graders to familiarize them with test directions and procedures. All required tests are untimed; it is estimated that students will need three to five hours to complete the tests in mathematics and reading. The Deparment recommends that districts schedule only one test session per day.

A random sampling procedure is used to select schools in which to administer tests containing items that measure skills in such areas as writing and listening. Data from these tests will provide state-level analytic data for use in revising and selecting items for future assessment programs.

The tests are not secure. Each year new tests are printed and distributed to schools. The schools are requested to recycle the tests (or destroy them), but the items are reused in succeeding years. Each teacher retains a copy of the test for remedial activities and curriculum modification.

Scoring and Analysis; Reporting/Dissemination

Local school and district staff receive various types of MEAP results reports from the State. The following reports are sent to the schools and districts after each testing:

1) INDIVIDUAL STUDENT REPORT: This report presents a student's performance on each test item for all of the reading and mathematics objectives, and indicates attainment or nonattainment of each objective (i.e., four out of five items for the objective were answered correctly).

2) CLASSROOM LISTING REPORT: This report summarizes, for an entire classroom, the information contained on the Individual Student Reports. It provides a quick way to determine the status of each student in the classroom for each reading and mathematics objective.

3) SCHOOL OR DISTRICT SUMMARY: This report lists the percentage of students in a school or district attaining a specific proportion of the objectives in each subject area.

4) TEST ITEM ANALYSIS: This report gives the percentage of students selecting each possible answer for each test question.

5) PARENT PAMPHLET: This report presents explanatory information about each student's test performance, and is available for teachers to distribute to each student's parents at teacher/parent conferences or by mail.

The public has access to all group test information. The local districts may send reports to newspapers, libraries, etc. The State does not require that test information become part of a student's permanent record, but some schools choose to put test results in the students' permanent files.

Use and Implications of Test Results

Consequences to students. While the law states that the Department "shall provide remedial assistance programs" (Act 38, Sec. 3), the Department allocates the requisite funds and strongly encourages local districts to develop their own remedial programs. As such, consequences to students for failing the tests depend upon individual local districts. The tests are not linked to promotion or graduation requirements. A Department survey has shown that over 50% of the teachers use the results from the assessment for the development of remedial programs.

Consequences to programs. By definition, school districts with pupils attaining fewer than 40% of the reading and mathematics objectives are eligible for State compensatory education funds. Districts with more than 15% of the total enrollment made up of eligible pupils receive $250 per pupil.

Provisions for Special Populations

The State expects that all students who are in regular classes more than 50% of the time will be tested. Students who are in regular classes less than 50% of the time may be excluded from testing at the discretion of the local school assessment coordinator. Examples of students who may be exempted from testing in MEAP are:

(1) severely mentally impaired;

(2) trainable mentally impaired;

(3) educable mentally impaired;

(4) other impaired students who receive instruction in special classes outside "regular" classrooms;

(5) any students who suffer severe emotional trauma during testing situations.

Program Resources and Costs

General program staffing. The program staff for competency testing is headed by a State Director, who oversees the work of a State Supervisor. The Supervisor manages a staff which includes a number of professionals spread across three units, three unit secretaries, and a secretary to the Supervisor. The first unit for test development is responsible for coordinating and reviewing the test development effort; this unit consists of a coordinator, two consultants, and a secretary. The second, the dissemination-utilization-analysis unit, consists of a coordinator, four consultants, a technician, and a secretary, and is responsible for publications, workshops, evaluations, and secondary analysis of data. The third unit, the test administration unit, is responsible for in-state management of the large-scale test administration, for responding to questions, and for liaison with the contractor; this unit consists of a coordinator, a technician, and a secretary. Twelve of the staff members are funded out of the general State funds and three of the staff members are funded from ESEA Title IVc funds. Staff members are predominantly persons with training in measurement and testing.

The staff is not directly involved in remedial activities, but trains other Department of Education personnel who go out to schools to work with local district staffs. The assessment group also runs workshops around the State.

Approximate costs. The budget for MEAP in 1978-79 was $950,000. Westinghouse Learning Corporation received $530,000 in that year for test printing, scoring, and reporting, and for a statewide tryout of new reading and mathematics items. A total of $290,000 went for State personnel and other resources such as travel and materials. Approximately $130,000 was spent on developing tests for each content area exclusive of the statewide field tryout.

Source of funds. Currently 90% of the funds come from general funds of the State of Michigan and are allocated yearly. Approximately $90,000 comes from ESEA Title IV funds. The assessment program is not a line item in the State budget.

Future Directions

The State hopes to implement a voluntary life roles competency testing program at the secondary school level, but it has not yet projected dates of implementation for this program. In 1979-80, pilot-testing of measures in writing, listening, speaking, health education, and career development may occur on a statewide sampling basis in grades 4, 7, and 10. Specific plans for statewide use of these tests, however, have not yet been made.

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DETROIT, MICHIGAN

The Detroit High School Proficiency Program, which was approved in 1977 by the Central Board of Education, will be fully implemented in the 1979-80 school year. The General Superintendent of the Detroit Schools proposed the development and adoption of the program as a means of improving the levels of student achievement in reading, writing, and mathematics and of ensuring that Detroit high school graduates acquire the basic skills necessary to function in society. The program comprises two closely related components: testing and competency-related instruction. The instructional component is to be designed and implemented by the individual school unit; testing, however, will be administered uniformly throughout the system. Beginning with the class of 1981, passing the proficiency test will be one of the requirements for receiving an academic high school diploma. Students will have opportunities to take the test in the tenth, eleventh, and twelfth grades.

The Special Education Department and a Bilingual Advisory Council are currently in the process of formulating recommendations regarding the participation of special education and limited-English-speaking students, respectively, in the program.

Legislative and Policy History

Policy history. The Michigan Educational Assessment Program (MEAP) passed in 1969 requires all the school systems in the State to assess their students in the fourth and seventh grades. Although the State did not influence Detroit's decision to implement a competency program, the State is supportive of the proficiency program concept. Since Detroit's program is independent of MEAP, which is state-operated (see Minimum Competency Testing in the State of Michigan, NES, 1979), this description will focus entirely on Detroit's activities.

A major factor in Detroit's decision to implement a proficiency program was the evidence from student testing. Both the MEAP data and the data from other achievement tests indicated that Detroit students performed below the standard which Detroit educators considered acceptable. Therefore, upon the recommendation of the Superintendent, the Central Board of Education unanimously approved the adoption of the new program in August 1977. The policy for the program called for basic competencies in reading, writing, and mathematics to be determined at the secondary level, and for proficiency tests to measure these competencies to be developed.

Program policy carries with it the implication that curriculum modification will take place as necessary for the purposes of the program. The directive grants each local unit the freedom to develop or modify its own curriculum, since one of the principles of the program is that the teachers and administrators in each school are in the best position to assess accurately the specific needs of their students, and to design and implement programs to meet these needs.

Phase of implementation. As preparation for the citywide implementation of the Detroit High School Proficiency Program in the 1979-80 school year, the following phases of the program have been completed:

(1) the selection of competencies in reading, writing, and mathematics;

(2) the development of proficiency tests and the support materials and procedures for competency-related instruction;

(3) the development of a pilot program and the administration of field tests to assess the validity of the testing and instructional programs, followed by the revision and modification of these materials as indicated by the results of the trials.

Each of these activities will be described below in the appropriate sections.

Goals and Purposes

The primary purpose of the Detroit High School Proficiency Program is to improve learning of fundamental skills by all Detroit students. A secondary goal is to guarantee to students, parents, and the community at large that graduates of the Detroit public schools possess necessary skills in reading, writing, and mathematics.

Competencies

In early 1978 a Competency Selection Committee was appointed. The Committee was made up of 40 members and included educators, parents, students, and representatives of the business community and of concerned citizens. A preliminary list of 25 competencies each for reading, writing, and mathematics was generated by the Committee and then publicized by accounts in the newspapers and on television, and through discussions held at the meetings of parents' groups and church organizations.

Questionnaires about the preliminary list were sent to all teachers and administrators in the Detroit public schools, to representative samples of high school students, and to representative samples of parents. The eight regional offices of the Detroit school system held open meetings and meetings with civic and business organizations to encourage public discussion of the competencies and to solicit the views of as many citizens as possible. In addition, the preliminary list was published in the Detroit Free Press accompanied by a response form, as another means of encouraging public participation in the process of competency selection.

Several meetings of the Competency Selection Committee were necessary in order to assimilate and evaluate all the information which was collected. The Committee's task, however, was simplified because analysis revealed "a remarkable uniformity" in the stated preferences of the public. Twelve competencies, four each in reading, writing, and mathematics, were finally selected; they are listed in Table 1.

Standards and Standard Setting

During the fall of 1979, it is expected that the Competency Selection Committee will participate in setting standards, and that data from the pilot program and from the city-wide field tests will assist the members of the Committee in this process. The recommendations of the Committee will be submitted to the Superintendent for approval.

TABLE 1

Competencies Assessed in the Detroit High School Proficiency Program

Reading

- Identifying Main Ideas
- Understanding Official Documents
- Using Common Reference Tools
- Comprehending Directions

Writing

- Employing Appropriate Mechanics in Writing
- Choosing Words Effectively in Written Communication
- Completing Forms and Applications
- Expressing Ideas in Paragraphs

Mathematics

- Problem Solving: Single Arithmetic Operations
- Problem Solving: Multiple Arithmetic Operations
- Problem Solving: Formulas
- Using Standard Measuring Devices

Target Groups and Testing Schedule

The Detroit High School Proficiency Examination will be administered to all tenth and eleventh-grade students in the early winter of 1980. Every year thereafter it will be given to tenth-, eleventh-, and twelfth-grade students. A tenth-grade student who fails to pass any one of the three competency tests will be remediated in the appropriate competency areas, and will have an opportunity to take the test again in the eleventh grade, and once again in the twelfth grade. There will be one opportunity each year to take the exam.

As preparation for the high school proficiency test, a test in communications skills is to be given to all ninth-grade students. A test is also planned for the eighth grade which will contain fewer items, but which will follow the proficiency test format. These tests are designed specifically for diagnostic purposes or as part of "an early warning system," since it is in the eighth and ninth grades that intense instructional emphasis on the competencies will begin.

Test Instruments

Late in 1977 major consulting firms were asked to submit their proposals for test development to Detroit. A representative committee of Detroit teachers and administrators chose the Instructional Objectives Exchange (IOX) of Los Angeles to develop the proficiency tests and support materials. For each competency IOX drafted a set of test specifications which were then reviewed by a Technical Review Committee made up of Detroit curriculum and measurement specialists drawn from the Competency Selection Committee. After a preliminary review and revision, all 12 sets of the specifications were finally approved by the Technical Review Committee.

IOX created approximately 60 items per competency, and there was a conscious effort to include materials of local relevance in the test items. All items were reviewed for bias by an outside specialist, as well as by curriculum and measurement specialists in the Detroit school system.

In May 1979 a field test of items was conducted with a matrix sample of students from grades 8, 9, 11, and 12. For the purposes of the field test, the students who made up the matrix sample were drawn from all the high schools and from 10 middle schools in the Detroit school system. The field test assessed each student in one competency area with a full version of the test for that area. The results of the field test will assist in the final selection and revision of test items. It is expected that there will be three different but equivalent test forms; each test is to consist of 120 items, or 10 items per competency.

Also in 1979, a mini-test was created which consisted of 52 items drawn from the high school proficiency test. This mini-test was administered to all tenth-graders and to a sample of special education students. This mini-test provided an opportunity to assess the proficiency of tenth grade students in the skills which are required for graduation; these students will be members of the graduating class of 1981, the first class to which the graduation requirements will apply. Results from the mini-test will also provide the schools with a summative evaluation of student performance for diagnostic purposes.

The Detroit program is primarily an instructional program. Therefore,a pilot program for the development and trial of instructional programs was initiated in two high schools and two middle schools of the Detroit school system, and completed in the late spring of 1979. Testing within the framework of the pilot program occurred, although its primary purpose was to assess the success or failure of the instructional strategies which IOX had designed for the proficiency program. Students in the pilot program were tested at the start of the program and upon its completion. The tests consisted of 10 items for each competency area; test results are to be available to school principals and staff in the summer of 1979 to assist them in their instructional planning for the 1979-80 school year. It is also planned to use these results to help set the standards for the high school proficiency test.

Test Administration

The High School Proficiency Exam will be administered in the classroom by local teachers. A complete security plan for the tests has not yet been drawn up. The tests are to be housed centrally, distributed as needed, and then returned to the testing department. Further details will be worked out before the administration of the tenth-grade and eleventh-grade tests in 1980.

Scoring and Analysis

The Office of Research, Planning and Evaluation will scan, score, and prepare reports for all tests.

Reporting/Dissemination

The Office of Research plans to send test results to the local schools for dissemination to counselors and teachers. Reports will also be mailed directly from the Office of Research to the students and their parents. Test results are to become part of a student's permanent record.

It is expected that reports of test results will also be sent to the Regional Staff and to the Central Staff of the Detroit school system; however, unless specifically requested, the Office of Research does not plan to send reports to the State.

At the end of each testing period, the Office of Research is to send each school an updated list of students who have passed each competency. The list is to give both the name and identification number of each student to facilitate record keeping.

Use and Implications of Test Results

Consequences to students. In Detroit, diplomas will be awarded to all graduating students, but those students who have passed the competency tests will receive diplomas with an endorsement or statement indicating that the tests have been passed.

Consequences to programs. It is one of the specific purposes of the Detroit High School Proficiency Program to diagnose and remediate students for deficiencies in the competencies. The program is a plan for the overall improvement of education; testing is seen as a vehicle for instructional improvement. Consequently, instructional and remedial programs play a role of considerable importance in achieving the goals set for the program.

To assist each school unit in the design of its own program, the Instructional Objectives Exchange developed a manual which contains general instructional principles for designing competency-oriented instruction as well as a series of competency-by-competency instructional suggestions. The strategies which the manual suggests range from those which individual teachers can introduce and use in their own classrooms to those which are appropriate for use only on a school-wide basis. The number and variety of instructional options make it possible to arrange programs to meet student needs as effectively as possible.

Provisions for Special Populations

The Special Education Department has been involved in the Detroit program from the very beginning. During the process of competency selection, the Department supplied information about the special methods and materials necessary for assessing special education students in the competencies. It has tentatively been decided that graduating special education students are to receive diplomas; however, all decisions on administering the competency tests to these students are yet to be made. The school system will make its decisions based on the recommendations of the Special Education Department. The Department recommendations in turn will depend upon test results from the 1979 mini-test which was administered to all tenth-graders and to a sample group of special education students.

Limited-English-speaking students are a concern in Detroit, and the school system has a Bilingual Department to deal with the special needs of these students. In addition to its large Hispanic population, Detroit also has a sizeable number of Chaldeans or Christian Arabs. These populations will have an opportunity to make their recommendations on the competency program through the medium of a Bilingual Advisory Council. As yet no policy has been set for assessing these students in the competencies.

Program Resources and Costs

General program staffing. Central and regional staff members operate the Detroit program. Approximately one staff member has been assigned to each high school to provide program support.

The Assistant Superintendent of the Office of Research, Planning and Evaluation coordinates program planning, assisted by an Implementation Committee that includes representatives from each of the eight regions and from other Central Office units. The Mathematics and Language Arts Departments at the central level have developed support materials for the program.

Approximate costs. The contract which Detroit awarded to the Instructional Objectives Exchange was for $281,194. This sum included costs connected with selecting the competencies, developing the test instruments, designing the instructional materials, and developing the program manual.

For 1979-80 the sum of $800,000 has been allocated to operate the proficiency program; the cost of testing materials, instructional materials, and the salaries of 19 staff members--approximately one for each high school in the system--are included in this sum. For the 1980-81 school year the allocation for the proficiency program will rise to $1,500,000; the increase is expected to cover the costs of additional materials and support staff.

Funding sources. The Central Board supplied the funds for the start-up costs and will also supply the funds for the continuing costs of the proficiency program. The increase in funds for the program is the result of an increase in the millage levy approved by voters in November 1978.

Program Evaluation

There will be a formal evaluation of the pilot program which was completed in the spring of 1979 in order to make modifications to the proficiency program before its citywide implementation during the 1979-80 school year. It is also planned to evaluate the program throughout its operation.

Future Directions

Continuing modifications and improvements of the Detroit High School Proficiency Program are expected to occur. The competencies are also subject to review and change.

Objectives and criterion-referenced tests for grades K-12 are currently being developed. The objectives will be closely articulated with the competencies already established for the High School Proficiency Program.

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LAWTON, MICHIGAN

The Lawton Community School System was the first in Michigan to adopt a comprehensive K-12 competency program, which in Lawton is called competency-based promotion. Since 1976 the present school administration has developed this program in an attempt to improve the low performance levels of Lawton students on the statewide tests. Teachers and administrators have made a major effort to refine educational goals, and to select and synchronize performance objectives and testing methods in order to ensure a continuum in the Lawton K-12 curriculum.

The Michigan State Educational Assessment Program passed in 1969 requires all school systems in Michigan to assess their students in the fourth and seventh grades; the State also recommends an optional tenth-grade assessment. Early State test results indicated that the performance levels of Lawton students were below average. The past few years, however, have seen an improvement in the Lawton scores, an improvement which is attributed to the Lawton competency-based program. The State furnished Lawton with data on the performance levels of its students, but played no role in Lawton's decision to implement a competency program.

Lawton pretests and posttests all its K-9 students in September and April. The graduation test is given to tenth-grade students in the winter of the sophomore year. There are special provisions in the program for Lawton's handicapped students, and programs for the migrant and bilingual students are under development.

Legislative and Policy History

Policy History. Beginning in 1969-70, Michigan required local school districts to administer an Educational Assessment Test in the fourth and seventh grades. There is an optional tenth-grade assessment which Lawton chooses to use. The tests are supplied by the Michigan Department of Education and are returned to the Department for scoring and compilation of data. Printouts are returned to the schools for the use of classroom teachers; the State sends folders to parents indicating the objectives and how their child fared on the test; and group scores are released by the State to the media. The State does not mandate competencies or standards for the local districts, although it recently set a passing score of 75% correct for the State test. A district whose students achieve low scores on the statewide assessment is eligible for State monies for remediation. Lawton's Superintendent views the State's role in their competency program as supportive only in the sense that the State provides hard data on student performance for the local districts. The Lawton competency program is entirely separate from the State assessment program.

As early as 1973 the Lawton Board of Education focused on competency requirements for graduation, when the Board established proficiency on the mathematics test as a requirement for its 1980 graduating class. In 1975 a curriculum study by some faculty and community members directed attention to certain problems. "Teachers, Board members, and administrators voiced a troubled concern about waning achievement, semi-literate graduates, and grade promotions based upon age not accomplishment" (Bandlow, 1978, p. 18). The State of Michigan's Educational Assessment Test showed that Lawton students had levels of achievement well below State averages. Symptomatic of the situation in the Lawton Schools was the 1975 valedictory address, which focused on the fact that many students were graduating without the skills necessary for their life roles.

In the summer of 1976 the present Superintendent was hired and efforts to implement minimum competency requirements redoubled. Competency-based education was seen as the means to effect a major change in the Lawton schools, and, as such, prompted staff and administrators to closely scrutinize the curriculum. The administration set a two-year timeline in the fall of 1976 for K-12 teachers and administrators to work together under the leadership of administrators to select performance objectives and set standards for each grade level, in grades K-8, and for each course level in grades 9-12. The objectives and standards emphasized the areas of reading and mathematics. To establish a logical and orderly progression of skill-building from one grade level to the next was the primary goal of the new program.

In early 1977 the School Board adopted a promotion policy that required students in grades K-8 to demonstrate an overall 80% mastery of the required grade-level objectives. Mastery is determined by standardized test results, by teacher-developed tests and unit tests that accompany the textbook series, and by teacher judgments. Science Research Associates (SRA) criterion-referenced standardized tests in reading and mathematics were selected as most compatible with the Lawton performance objectives; the SRA Survival Skills Test in Reading and Math was selected as the graduation test.

Phase of implementation. Lawton initiated its grade-to-grade promotion and retention program in the 1976-77 school year, at the same time that the teacher committees were selecting performance objectives, setting mastery levels, and determining the proper test instruments for the program. The SRA Survival Skills Test in Reading and Math used as the graduation test was given for the first time to tenth-graders in the school year 1978-79, so that the class of 1981 will be the first subject to these requirements.

Goals and Purposes

In broad terms the purposes of the Lawton competency-based promotion program are ". . . to make education mean something, and to define that meaning to ourselves and to our community" (Bandlow, 1978, p. 19). The program is also designed to ensure that Lawton students master skills necessary to survive in the adult world. Specific purposes of the program, according to the present superintendent's policy statement, are to assist in decisions about grade-to-grade promotion and retention, student diagnosis and remediation, and curriculum modification.

Competencies

Lawton's competency-based program originated entirely at the local level and combines life skills with basic skills. Early in 1977, the Lawton School Board established the following basic goals of education:

(1) developing skills in reading, writing, speaking, and listening;
(2) developing skills in natural sciences, math, and social sciences;
(3) developing pride in work and a feeling of self-worth;
(4) developing the ability to examine and use information;
(5) developing good character and self-respect;
(6) developing the ability to respect and work cooperatively with others.

However, reading and mathematics were the competency areas selected because the teacher committees considered these as vital to the students' future welfare. Student performance in these two areas will determine decisions for promotion, retention, and graduation.

The selection and identification of the competencies is a continuing process which takes place in teacher committees working under the direction of school administrators. The committees are directed by the three principals of the district, each of whom has the responsibility for a given curriculum area for grades K-12. It is the responsibility of the principal and the teaching staff for each content area to develop the performance objectives for each grade level in that area. The performance objectives are statements of the minimum student accomplishment for which Lawton will award credit. "They relate primarily to cognitive rather than affective expectations" (La Sotta, 1979, p. 1). In selecting the objectives or competencies, Lawton's textbook series, Houghton Mifflin in reading and the Holt Math Series, figures prominently. There is an effort to correlate the performance objectives and competency tests to these textbooks. It is also the case that the competencies are entirely integrated with the curriculum; no separate listing of competencies by grade level is available.

With respect to graduation requirements, the teacher committees selected the SRA Survival Skills Test in Reading and Math for the graduation test because it most clearly reflected the performance objectives and competency requirements they thought necessary for high school graduation. It emphasizes "real-world" tasks such as:

Mathematics

Making Change
Total Income
Weekly, Monthly, and Yearly Wages
Unit Cost Comparisons
Take-home Pay
Budgeting
Totaling Expenses
Sales Slip Itemization
Weekly Savings
Piece-Rate Wages
Monthly Payments
Sports Scores and Averages
Construction Costs
Recipe Quantites
Time, Rate, and Distance
Utility Bill
Amount of Floor Covering
Totaling Gasoline Costs
Cost of Keeping Pets
Construction Quantities

Reading

Medical Instructions
Caution Labels
Consumer Terms
Road Signs
Simple Directions
Warning Signs
Floor Plans
Safety Handbooks
Street Guides and Maps
Application Forms
Product Labels
Store Directory
Telephone Book
Business Statement
Entertainment Guide
Menu
Advertisements
Plane Schedules
Simple Contracts
Concert Program

Standards and Standard Setting

The standards for promotion were set by the teacher committees and the administrators; the standards were then approved by the Board. The criteria used in determining mastery are: standardized tests, teacher-developed tests and unit tests that accompany the textbook series, and teacher judgments. Decisions to promote, retain, or graduate are based on all three criteria, since the committee was mindful of the fact that some students may not test well, although they may perform adequately in class. A K-8 student must achieve an overall score of 80% in the skills for a given grade level. A high school student must demonstrate an overall mastery of 80% of the competencies established for any particular course.

The SRA Survival Skills Test is the high school graduation test given to tenth-graders. The test has 20 objectives in reading and 20 in mathematics. Each objective is tested by three items. In order to master an objective the student must get all three items correct; in order to pass the test the student must master 80% of the objectives in reading and 80% of the objectives in math. A student classified as a special education student must meet an individualized set of standards.

Target Groups and Testing Schedule

Lawton pretests and posttests all K-9 students in September and April. The teachers use the information from the pretest to help plan the program for the school year, and then measure the success of the program with the posttest.

The SRA Survival Skills Test is given first in the winter of the sophomore year in high school. A student may take the test an unlimited number of times in order to pass. If a student passes one section, but not the other, he/she only retakes the failed portion.

The reason for testing each year in grades K-9 is that "proficiency testing for high school seniors is a futile requirement if left to stand by itself. . . . To develop a functional system, one must fine-tune the process, not the end product. Quality control in education requires an emphasis on K-8 competencies, at each grade level, and course level competencies in grades 9-12" (Bandlow, 1978, p. 18).

Test Instruments

Criterion-referenced Science Research Associates tests in reading and math were selected by the teacher committees for use in grades K-9. The SRA Survival Skills Test in Reading and Mathematics, which is also a criterion-referenced test, is given to tenth-grade students. Unit tests accompanying the textbook series and teacher-made tests are also used.

The SRA K-9 tests and the SRA Survival Skills Test for the tenth grade were selected as the commercial tests most compatible with the performance objectives set by the teacher committees. It was necessary to make modifications in these test instruments by deleting items which cover material that is not taught in the Lawton curriculum, and by adding other items for material which has not been covered by the teacher-made tests.

One series of tests applied uniformly in grades K-12, both fall and spring, was considered by the staff and administrators to be crucial to the success of the competency-based promotion program. "To the administrators, test results became a means of quality control" (Bandlow, 1978, p. 19). The School Edition of the SRA Survival Skills Test contains 120 test questions measuring 20 objectives in reading and 20 objectives in mathematics, with each objective tested by three multiple-choice items.

Test Administration

There is a Compensatory Education Coordinator in charge of Lawton's competency testing program who explains and disseminates test information. Classroom teachers administer the SRA criterion-referenced tests for grades K-9. The SRA Survival Skills Test is administered to high school students, beginning in grade 10 grade, by the high school guidance counselor. Parental permission for the tests is not required. Both the Superintendent and the Compensatory Education Coordinator believe that test security has not been a problem, because only one person is in charge of the testing program. There is, however, only one form of the Survival Skills Test. The Superintendent and the Compensatory Education Coordinator indicated that they expect to purchase another graduation test in a few years.

Scoring and Analysis

The SRA tests, those for grades K-9 and the graduation test, are sent to the test publisher for machine scoring. This has not been entirely satisfactory from Lawton's point of view because of the delay in receiving test results. Delays are often as long as six weeks, which makes it difficult to base decisions about promotion and retention on test results. Consequently, teachers do their own scoring before sending in the tests, so that the tests are actually scored twice.

The SRA Criterion-referenced Measurement Program Central Scoring offers three reports to the school: the Individualized Student Profile, which indicates the total number of SRA objectives tested, the number of SRA objectives mastered by the student, the percentage of SRA objectives mastered by the student, and the number of correct answers to questions for local objectives; the List Report, which indicates the number of students mastering each objective, the number of SRA objectives tested, the average number of SRA objectives mastered by students, and the average percentage of SRA objectives mastered by students; and the Group Summary Report, which indicates the number of SRA objectives tested, the average number of SRA objectives mastered by students, the average percentage of SRA objectives mastered by students, and the average number of questions for local objectives correctly answered by students.

Reporting and Dissemination

It is usually the practice that teachers go over individual test results with each student item by item, so that the student can see his/her strengths and weaknessess.

The local performance objectives are listed on checklist forms filled out by teachers. This form is distributed to parents and students in the fall and again at report card time, to indicate which course objectives have been mastered and to substantiate the grade earned for the course.

Test results in the form of the Individual Profile Reports are sent home with middle and high school students. Test results for elementary school pupils are sent home with their report cards, and become a part of the students' permanent records. In October, during parent-teacher conferences, about 90% of the parents of elementary school students receive a nine-week report card and a copy of their child's test results with an explanation of these results. The test results are not disseminated to the State; they are for local use.

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At this time test results are not a part of the report card; the card is, however, being redesigned to include the scores for performance objectives rather than just letter grades.

Use and Implications of Test Results

Consequences to students. Students who pass 80% of the grade-level competencies as determined by teacher observation, teacher-developed tests, and the SRA standardized tests are promoted from one grade to the next. Failure to pass the tests may mean retention at the current grade level. The actual decision to promote or retain is made by the principal, who acts upon teacher recommendations. High school students who fail to pass the course objectives are reclassified to a lower status.

Lawton began retaining students under the new program in 1976-1977. The retention rate prior to 1977 was 1-3% of the student body; 1977, 1978, and 1979 saw a retention rate of about 15%. Many of the retentions occur in the early elementary grades, although there are also a significant number of retentions in the middle school. The Superintendent indicated his belief that these middle school students are now suffering because so many had been given social promotions year after year and therefore are several years behind grade level in achievement.

In 1981 seniors will not receive diplomas unless they have passed the SRA Survival Skills Test, nor will students who fail the graduation test receive a Certificate of Attendance or the equivalent. There is no early exit provision for Lawton high school students.

When the Survival Skills Test was given this year to sophomores, approximately one-third scored 80% or higher in both competency areas. The two-thirds who did not pass will be retested early in the fall only on those items they missed. The Superintendent estimates that another one-third will pass at this time, because many students had scores of 65-70%, which meant that they were only a few items away from a passing score. Those who do not pass have nearly two full years for remediation. Students who fail at any grade level, K-12, are remediated.

Consequences to programs. In 1976 the teacher committees began to make changes in the program and the curriculum in order to develop a competency-based education program. A specific purpose of the Lawton program is individual student diagnosis and remediation. Remediation in Lawton begins with a pre-kindergarten screening device. If the screening indicates that a child is not ready for school, the parents are encouraged to keep him/her home another year. In the school year 1979-80, a child who does not do well in kindergarten, instead of repeating the kindergarten year, will be referred to a "bridging room" before going into the first grade.

Students are remediated through two programs. The state-funded Chapter III program is for remediation in reading and math for grades 1-6. There is one staff member who operates this program, and students are pulled out of their regular classes for remedial work. The Title I Program for grades 2-12 in reading is to be expanded during the 1979-80 school year. There will be two full-time teachers and a full-time reading aide. Students admitted to this program are formally screened, stay in the program for the year, and then are either screened out or continue in the program. Remediation to prepare a student to meet the graduation requirements is accomplished either through the Title I Program or the Consumer Education classes required for all juniors. The teachers of the Consumer Education classes receive a list of students who need help in certain competency areas. The specific means of remediation to be employed have not yet been established.

Extensive curriculum revision, which is a continuing process, was first initiated in conjunction with the development of the competency program. Since 1976, the teacher committees, working with one of the three principals, set performance objectives, determined levels of mastery, and examined test instruments for compatibility with the locally set objectives. Each of the three principals is in charge of a given curriculum area for grades K-12. In the past, the high staff turnover rate made the codifying and rating of performance objectives very important to the success of the program; at present, however, staff turnover rate is the lowest in 10 years.

A recent development in the middle school grades 5-8 is Project BACSTOP, which attempts to instill positive attitudes in students and provide them with the motivation to succeed not only in the classroom, but in all spheres of activity. Students and teachers share a live-in camp experience for three days and two nights. Project BACSTOP is one example of how the Lawton competency program tries to develop positive attitudes in its students and to increase their self-esteem.

Provisions for Special Populations

Special education students may not need to meet all of the standards for promotion and/or graduation. Decisions about requirements for each special education student are made by all of that student's teachers, the parents, the diagnostician, and administrators. Each special education student has his/her own Individual Education Plan, and will receive some form of a diploma in any case.

Lawton has a migrant student population of about 20 and has a program for these students with one full-time staff member. The migrant program overlaps the bilingual program to some degree, but does not necessarily take in the same group of students. There is a much higher proportion of migrant students in the fall and spring, and this instability of the population creates special problems for the Lawton school system.

The bilingual program has a three-fifths-time staff person who works with about 50 Spanish-speaking students. These students, as well as the migrant students, receive special instruction and tutoring. At this time all of these students are subject to the competency requirements. Most of the students in both programs are in the elementary or middle schools; consequently, no decisions have yet been made as to how these students will meet the graduation requirement of passing the SRA Survival Skills Test. The Superintendent has considered the possibility of having the 1981 graduation test read in Spanish for these students if necessary.

Program Resources and Costs

General program staffing. There is a Compensatory Education Coordinator who directs the competency program in Lawton. The curriculum committees (or teacher committees) are directed by the three school principals working under the Superintendent. Remediation is handled by the regular teaching staff as well as by the special remedial staff hired under Chapter III and Title I.

Approximate costs and funding sources. The initial start-up cost of the program was $4,000. The cost of remediation alone will be $65,000 in 1979-80; this sum includes costs for both staff and materials, and will be covered by Title I and Chapter III funds from the State and federal governments. Because of its poor showing on the Michigan Assessment Test, Lawton became eligible for Chapter III funds beginning in 1975, amounting to about

$23,000 a year. Since this is the fourth and last year for Lawton to participate in the state-funded program, Lawton will assume the cost of the Chapter III Program in the year 1979-80, which may mean reallocating the budget.

In 1977 a large millage renewal and a smaller millage increase were approved in order to implement the K-12 standardized testing.

Program Evaluation

Lawton has not formally evaluated its program at this time, nor does the district plan one in the immediate future. The Superintendent believes that the program will "turn things around," and he cited the Michigan State Assessment Test results as hard data in support of his belief: Lawton students improved their scores in 1977 by 7% from the previous year, and increased another 7% in 1978. He also asserted that the teachers have found that students now are more serious and cover more skills in the classroom than they did before the advent of the program.

Future Directions

The Superintendent has indicated a desire to solve the existing problems in the Lawton program. There is a feeling that standards are still too vague, although the staff and administrators anticipate that it will take another year or two before this problem is solved. Migrant students and bilingual students must be dealt with in relation to the competency requirement. For the transfer student, who may also be migrant or bilingual, there is the problem of having to adjust from one standard of performance to another which may be entirely different. The teacher committees still have some work left to do in setting performance objectives. All these problems will receive careful attention in the future; at the same time the Lawton competency program continues to undergo continual scrutiny and revision.

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MISSOURI

Minimum competency testing in Missouri was mandated by the State Board of Education in September 1978 in the form of a test instrument called the Basic Essential Skills Test (BEST). Starting with its first administration in March 1979, BEST will be administered annually to all grade 8 students and students at higher grade levels who have not previously taken the test or have previously failed to pass one or more subtests.

The purpose of BEST is "to provide an objective measurement of each student's knowledge of certain basic information in arithmetic, reading/language arts, and government/economics and the application of such knowledge to the solution of practical everyday problems." To meet this purpose, the test includes three subtests: mathematics, reading/language arts, and government/economics. In order to identify students with difficulty in basic skills in ample time to assist them prior to graduation, BEST is first administered at the grade 8 level. It is then readministered to any students in grades 9-12 who failed to pass one or more subtests on previous occasions. While students are required to take BEST, passing it is not a prerequisite to graduation.

Beginning in 1974, the Missouri Department of Elementary and Secondary Education received funding for the implementation of an elementary and secondary testing and assessment program which provides a variety of tests for kindergarten through grade 12. All the tests under the Missouri Testing and Assessment Program are available to all local public schools that wish to use them. The tests emphasize reading and mathematics for grades 2-7. For grades 9-12, Tests of Academic Progress (TAP) include not only reading and mathematics but subtests in social studies, composition, science, and literature. For students in grade 10, a General Aptitude Test Battery is provided for those planning a vocational education, and, in grade 11, the Missouri School and College Ability Test is made available for those students planning college admission. In grades 6 and 12 an assessment program is available in which schools can utilize the results to evaluate their total educational program.

None of the tests except BEST is mandated in any way by the State Board of Education or the Department of Elementary and Secondary Education. Nor are they directly related to BEST except for the fact that those Missouri schools choosing to employ any or all of the optional tests are aided in making decisions about program selections and tional processes which, in turn, may help students pass and master BEST prior to their graduation.

Legislative and Policy History

Policy history. For some years prior to 1976, Missouri parents, taxpayers, legislators, and educators had, in increasing numbers, expressed concern about the ability of high school students to perform adequately in applying basic skills to life situations. Comments in the media and letters and comments from business/industry groups, labor groups, parents, school personnel, and students which directly expressed such concern led the Missouri State Board of Education to direct, in April 1976, that the State Department of Elementary and Secondary Education develop a program to evaluate the performance of Missouri students in the area of basic skills. At the same time, the State Board of Education adopted "basic skills learning" as its highest educational priority.

The State Commissioner of Education, as the first step in carrying out the Board of Education's mandate, appointed a committee of seven members of the Department of Elementary and Secondary Education to make a comprehensive study of the competency testing concept and to recommend several possible approaches to the State Board of Education for consideration. The committee investigated materials and objectives for competency testing programs in other states and talked with subject-matter specialists, business/industry representatives, labor and agricultural people, college and university officials, and students.

A 60-member Advisory Council was invited to meet in July 1976 to study the competency test rationale and concepts developed by the committee. The Council also examined the objectives drafted by the committee and made suggestions which were incorporated into the competency test plan finally formulated.

Following the Advisory Council meeting, the general concepts which guided the development of the program were agreed upon by the State Board of Education and discussed by Missouri educators and citizens during 11 Regional Educational Conferences held throughout the State during the balance of 1976.

The test instrument developed from the activities described was named the Basic Essential Skills Test (BEST). It includes subtests in three areas: reading/language arts, mathematics, and government/economics.

Phase of implementation. In the fall of 1976, the Department of Elementary and Secondary Education field-tested items for grades 8, 10, and 12 in order to establish their validity and reliability. In the spring of 1977, the Department pilot-tested BEST in grades 8, 10, and

12 in 51 of Missouri's 450 local districts. In the school year 1977-78, all local districts wishing to do so were permitted to use the test. In September 1978, the State Board of Education mandated all public school districts to administer BEST to grade 8 students each year, beginning in March of 1979. The State Board of Education further mandated that in subsequent years the test is to be administered annually to all students above grade 8 who had not taken or had not passed the test or any subtest previously; this requirement does not apply to students who were in grade 8 prior to 1978-79.

Goals and Purposes

General goals. The aim of Missouri's BEST program is, in the words of the State Board of Education, "to provide an objective measurement of each student's knowledge of certain basic information in arithmetic, reading, government and economics, and the application of such knowledge to the solution of practical everyday problems." BEST emphasizes the application of basic academic skills to life situations. It is intended to serve as an instructional tool and screening device that will identify students' deficiencies while sufficient time is available to accomplish remediation.

Specific purposes. The Basic Essential Skills Test is based on the assumption that before leaving school each student should:

(1) be able to read at a literate level;

(2) be able to handle language in its written and spoken forms;

(3) be able to apply arithmetic to everyday situations;

(4) know the fundamental processes of government essential to good citizenship;

(5) understand the basic economic principles which affect one's everyday life.

Competencies

The Department of Elementary and Secondary Education developed 13 objectives in each of the three competency areas of the BEST program: reading/language arts, mathematics, and government/economics. These 13 objectives are assessed by the paper-and-pencil BEST tests. The Department developed two additional objectives in mathematics and eight additional objectives in reading/language arts which are not assessed by BEST, but must be tested by local schools. These objectives, relating to skills such as speaking, writing, and measuring, are more difficult to accurately assess by a paper-and-pencil test, which is the reason for their being verified locally. See Table 1 for a listing of the 39 objectives which are assessed by the paper-and-pencil tests provided to local districts by the Department of Elementary and Secondary Education. Table 2 includes those 10 additional objectives which must be tested and evaluated by the teachers appointed as local test administrators.

In developing BEST objectives, the State Board of Education played a major and continuing role from inception in 1976 to final approval of the program in 1978 and implementation in the spring of 1979. The Department of Elementary and Secondary Education kept the State Board of Education informed of progress at all times during the three-year period of BEST's evolution, but implementation of the program remains, both in broad outline and in some details, subject to State Board of Education mandate.

Standards and Standard Setting

The Missouri State Board of Education established passing standards for the BEST program. These require students to pass the 39 objectives measured in three state-developed subtests in reading/language arts, mathematics, and government/economics, and the 10 locally administered objectives in the two subtests for reading/language arts and mathematics. To pass the state-developed subtests, the student must both respond correctly to at least one of three items for each objective, and also attain a total score of at least 75% correct in each subtest. The Department has also set "mastery" levels for the subtests. If a student answers two of three items correctly, and attains a total score of 80% correct, he is considered to have mastered the objective or subtest.

TABLE 1

Basic Essential Skills Test Objectives Employing Paper and Pencil (by Subtest)

Reading/Language Arts

1) Identify and interpret terms and directions used on medicine bottles.

2) Identify and interpret the meanings of labels and symbols that caution the reader against specific dangers.

3) Identify and interpret items labeled with consumer vocabulary in order to select them for a specific purpose.

4) Interpret and indicate the proper response to commonly used signs.

5) Use reference materials and sources to obtain information to solve personal problems.

6) Recognize the main idea and specific details contained in a written selection.

7) Analyze a written selection to note the purpose of the writer, techniques used to convey fact or opinion, possible effects on the reader, and the type of persuasive devices used.

8) Recognize a correctly completed form.

9) Interpret the meaning of business correspondence and simple contracts.

10) Identify and interpret types of information contained in various sections of a newspaper.

11) Interpret the meaning of such commonly encountered documents as menus or ballots.

TABLE 1 (continued)

Reading/Language Arts (continued)

12) Follow a set of written directions.
13) Interpret information presented in a graphic or pictorial manner.

Mathematics

1) Add and subtract whole numbers in sample problems involving real-life situations.
2) Multiply and divide whole numbers in sample problems involving real-life situations.
3) Add and subtract common and decimal fractions in sample problems involving real-life situations.
4) Multiply and divide common and decimal fractions in sample problems involving real-life situations.
5) Solve sample problems involving business and consumer situations.
6) Solve problems involving measures of perimeter, area, and volume.
7) Solve problems involving measures of time and temperature.
8) Interpret information from charts, graphs, tables, maps, and scale drawings.
9) Solve sample problems by applying the concept of ratio and proportion.
10) Interpret simple probability and statistical statements relating to common situations such as weather reports and opinion polls.
11) Determine the average for given numerical data.

TABLE 1 (continued)

Mathematics (continued)

12) Identify horizontal, vertical, parallel, and intersecting lines.
13) Identify simple plane and solid geometric figures.

Government/Economics

1) Understand the meaning of the term "democracy" and such basic democratic values as liberty, equality, justice, rule of law, peace and order, and consent of the governed.
2) Understand the processes of making, enforcing, and interpreting law in the United States.
3) Understand what rights are guaranteed to American citizens.
4) Recognize that in the United States some limits are placed on individual rights and freedoms for the purpose of protecting the interests of society and the rights of other citizens.
5) Understand the basic responsibilities of citizenship in our democratic system and how citizens may influence the government.
6) Understand the roles of various government officials, of people who lobby to influence the government, and of people who work within the legal system with whom students may come into contact.
7) Understand the basic factors related to the production of goods and services.
8) Understand and be able to apply basic information about how private business functions in the United States.
9) Understand and be able to apply basic information about how the government functions in the United States economy.

TABLE 1 (continued)

Government/Economics (continued)

10) Predict how one change in the economy will result in other changes.

11) Be able to use rational thought processes when making simple, personal economic decisions.

12) Recognize the rights and responsibilities of consumers.

13) Have basic understanding related to the use and handling of money and to simple personal investments.

TABLE 2

Basic Essential Skills Test Objectives
Tested Locally (by Subtest)

Reading/Language Arts

1) Speak and write effectively in different social and business situations and with persons of varied ages or backgrounds.
2) Write with complete sentences, with acceptable sentence structure, acceptable grammatical construction, and correct spelling and punctuation.
3) Use reference materials and sources (including human sources) to obtain information to solve personal problems.
4) Recognize the main idea and specific details in an oral presentation.
5) Complete a business form correctly and neatly.
6) Communicate with persons of different age groups and in different situations by reading orally.
7) Recognize and locate parts of the newspaper.
8) Follow oral or written directions to complete a process.

Mathematics

1) Use standard measuring devices to measure length, area, volume, weight, time, and temperature in common English and metric units.
2) Estimate the results and judge the reasonableness of answers to computational problems.

To pass the 10 locally evaluated objectives, the student must receive a "satisfactory" rating on each objective. While the Department of Elementary and Secondary Education has developed criteria to help test administrators standardize the rating system, it remains the prerogative of each local district to administer and evaluate the 10 objectives according to its own standards.

The performance standards for the 39 state-developed objectives measured in the three subtests in the BEST program are absolute in nature. The criteria are predetermined, and each student's performance is evaluated in terms of these standards alone. The performance standards for the 10 locally administered objectives are determined according to local criteria.

Target Groups and Testing Schedule

BEST was first administered on a census basis, by State Board of Education mandate, in a two-week period in March 1979 to 69,802 grade 8 students in Missouri public schools. In subsequent years, BEST will also be administered in March to all grade 8 students and to students in higher grades who did not take or failed to pass any of the three subtests comprising the BEST program. Test administration continues until the year of graduation for those students failing any subtest. The Department of Elementary and Secondary Education provides both instructions and a detailed time schedule to local school districts for all BEST-related activities. The rationale for BEST testing in March is to allow time for data processing results before the end of the school year. Grade 8 is considered by the State Board of Education to be the optimum year for BEST testing, as it allows adequate time for remediation in the final four years of schooling, and also marks the end of formalized reading instruction in many of the Missouri public schools.

Test Instruments

The BEST program includes three paper-and-pencil subtests that were developed by committees which assisted the Department of Elementary and Secondary Education. The subject areas are: reading/language arts, mathematics, and government/economics. Each subtest measures 13 objectives with three items per objective, for a total of 39 items on each subtest. In addition, there are two objectives in mathematics and eight objectives in reading/language arts which are evaluated by local schools. These objectives relate to skills such as speaking, writing, and measuring. Test forms for the BEST program will be changed each year.

The Department of Elementary and Secondary Education describes BEST as "a test of minimum adult competencies," emphasizing the "importance of knowing how to apply basic academic skills. . . . The BEST is intended to be used as an instructional tool to help identify the strengths and weaknesses of individual students on the 49 objectives included in the test." To support this concept, the Department has developed Resource Guides in all three content areas assessed by BEST. The guides provide suggested activities keyed to each BEST objective that will assist students to attain a passing score.

Test Administration

BEST materials are sent by the Department of Elementary and Secondary Education to each local school district. The test is administered by a coordinator designated by the school district. The test coordinator is also responsible for maintaining security of the test materials and for sending all test materials for scoring to the Missouri Testing and Evaluation Service of the University of Missouri in Columbia. Test coordinators receive a detailed 46-page Guide for the Basic Essential Skills Test prepared by the Department of Elementary and Secondary Education. The test administration procedures do not provide for any pretesting practice by students or for retesting of students.

Scoring and Analysis

Administration and scoring of the ten locally evaluated mathematics and reading/language arts objectives is completed before the administration of BEST's three paper-and-pencil subtests. The teacher then precodes each student's answer sheet either as "pass" or "fail" for each of the 10 objectives.

Following administration of BEST, student answer sheets are sorted and packaged by the teacher and transmitted by the school to the Testing and Evaluation Service for processing.

A number of score reports are produced. Individual student scores are reported by subtest. The Student Report indicates the number of objectives passed, the number of objectives mastered, the number of items answered correctly for each objective, which of the locally administered objectives were passed, and which of the locally administered objectives the student must retake.

Schools receive three separate reports. A School Report provides information for each objective, such as percent of correct responses, percent of students who correctly answered one, two, or all three items for each objective, and total number of students who passed locally evaluated objectives. Each school also receives a Passing Summary that provides the number and percent of students who passed each subtest, all subtests, or at least one subtest. Schools also receive a report which lists those students who must retake certain subtests or locally evaluated objectives.

The School District receives two reports which report district-wide data in the same format as the previously described School Report and Passing Summary.

Reporting/Dissemination

Within two weeks of the receipt of BEST forms and materials by the Missouri Testing and Evaluation Service, the schools receive four types of BEST results. One summary gives each student's scores in a concise format in duplicate on individual adhesive-backed labels. One of these labels may be affixed to a student's permanent file, and the other may be kept in the counselor's file. The second summary is a separate computer sheet in triplicate for each student showing the student's performance on a subtest. The school may send a copy home with the student, place a copy in the student's file, and send the third copy to the appropriate subject-matter teacher. The District Report, which includes test data for all students in the school district, may be used by principals, supervisors, and staff members at the school official's discretion. The fourth summary is a roster of students who did not pass one or more of the subtests or locally evaluated objectives. This roster identifies students who need additional instruction in one or more areas and who need to retake part(s) of BEST in grade 9.

Use and Implications of Test Results

Consequences to students. Students who receive a passing score (75% and a correct response to at least one out of three items for each objective) on any BEST subtest in grade 8, need not repeat that test. Those students failing in one or more subtests must repeat the part(s) failed in following years until passed or until the student is graduated. The program encourages districts to provide special help to those students failing to pass BEST subtests. Passing the BEST is not a prerequisite for graduation.

Consequences to programs. The Department of Elementary and Secondary Education has developed activity guides and a number of other publications to help teachers provide instruction related to BEST objectives. The Department also holds BEST workshops and provides technical assistance to local school districts requesting them.

Provisions for Special Populations

The Missouri State Board of Education has mandated that students "enrolled in special education classes may be exempt or be given the BEST in a modified manner when specified in the Individualized Education Program (IEP)." The categories of students in IEP classified as handicapped include those mentally retarded, those with behavior disorders, orthopedic handicaps, learning disabilities, or those who are deaf, blind, or in need of speech correction. For such students, special BEST testing techniques may be prescribed by the IEP. When such techniques are required to assess a student's achievement of BEST objectives, the local district assumes responsibility for the selection and implementation of special testing methods.

Program Resources and Costs

General program staffing. Within the Missouri Department of Elementary and Secondary Education, there are four professionals who are familiar with the BEST program and devote about 30-35% of their time to BEST activities. As there are new BEST objectives each year (although the number remains constant), new objectives and items are field-tested by a number of Department specialists who devote about 25% of their time to this activity. Department curriculum specialists develop BEST activity books for use by local districts; they also provide technical assistance as requested by local districts, and organize about 40 BEST workshops around the State for district and local school personnel.

Approximate costs and funding sources. In 1976-77, a total of about $54,000 was spent by the Department of Elementary and Secondary Education on various committee meetings and conferences called for developing the concept of BEST and the component elements of the test; for printing booklets and answer sheets; and for scoring, reporting, field-testing, and pilot-testing. Costs for 1977-78 totalled about $67,000 for field- and pilot-testing, printing test booklets, and scoring and reporting results. In 1978-79, the first year of official BEST testing, about $110,500 was spent on program-related activities. The budget of the Department of Elementary and Secondary Education is the source of funding for the BEST program.

Program Evaluation

The first administration of BEST took place in March 1979. The Department of Elementary and Secondary Education is currently formulating plans for the design of an evaluation of the program. A formal, large-scale evaluation of the BEST program objectives is contemplated in four years.

Future Directions

The Department's Director of Pupil Personnel Services indicates that the Department of Elementary and Secondary Education will proceed with the Basic Essential Skills Test program as now designed. Bills have been introduced into the State legislature which would have changed the BEST program, but these did not pass. There is no indication at the present time as to what, if any, legislative action may be taken.

Future modifications to the program may also be mandated by the State Board. At a later date, for instance, the Board plans to consider whether State minimum graduation requirements will be amended to require students to pass the BEST in order to receive a high school diploma.

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NEBRASKA

In August 1975, the State Board of Education incorporated provisions requiring school systems to assess student mastery in the areas of reading, writing, and mathematics into the regulations governing school approval. School systems must test students at the elementary and secondary levels, but performance on the competency measures is not tied to promotion or graduation. Local school systems also have responsibility for: determining the particular grades to be tested, setting the testing schedule, selecting and administering the tests, and determining mastery standards. Compliance with the provisions of Rule 14 was required as of the effective date of the provisions and is monitored through school-approved procedures.

In order to assist local districts in complying with the provisions of Rule 14, the State Department of Education has developed the Nebraska Assessment Battery of Essential Learning Skills (N-ABELS). Available for use by the school systems in the state, N-ABELS assesses twelve essential skills in the areas of communications (reading, writing, spelling), mathematics, and inquiry skills. Mastery of these skills is defined as being errorless performance on most of the tests.

Legislative and Policy History

In 1970-71, a statewide educational needs assessment conducted by the Nebraska State Department of Education revealed that the public places high priority on the acquisition of basic skills, and, further, it believes that teaching basic skills is a primary responsibility of the schools. The following statement was adopted by the Nebraska State Board of Education in October 1972, and, in September 1976, was included in the State Board Policy Manual:

> "We believe that the basic skills--reading, mathematics, ability to communicate in writing, spelling, language arts--are necessary to effective learning and collectively necessary to the survival of our society. Consequently, such programs should be maintained in all schools that will afford essential skills in these areas for all students to the limit of their potential" (SDE, 1977, p. 1).

In support of this position, the State Board of Education revised its Regulations and Procedures for Approving the Continued Legal Operation of All Schools and the Opening of New Schools (this set of regulations is known as Rule 14) in August 1975 to include provisions requiring that elementary and secondary schools "utilize a competency measure which assesses mastery of minimum acceptable performance in reading, writing, and arithmetic skills" (Rule 14, pp. 11, 22). The explanations of these provisions in the text of Rule 14 specifically discourage the use of normative standards on the grounds that they "do not describe mastery"; only criterion-referenced instruments may be used to meet the intent of this provision. It should be noted that these explanations are not requirements of Rule 14; rather, they are intended to clarify the provisions and provide guidance to schools regarding compliance.

In May 1977, the Nebraska State Board of Education passed a motion recommending that schools place greater emphasis upon the basic skills and reaffirmed the provisions in Rule 14 related to competency assessment.

In a sequence of events that occurred during approximately the same period, but were not specifically in response to the State Board's addition of the competency testing provisions to Rule 14, the Nebraska Department of Education developed an instrument for assessing the skills considered essential for continued success in school. The product of this work was the publication in the summer of 1975 of the Nebraska Assessment Battery of Essential Learning Skills (N-ABELS), which identifies basic skills in the areas of communications (reading, writing, and spelling), mathematics, and inquiry skills, and methods for checking student acquisition of these skills.

The competency testing provisions of Rule 14 refer to the N-ABELS tests as one competency measure that may be used to meet these requirements, but use of these particular assessment instruments is not mandated.

Phase of implementation. Although the State does not mandate a date by which school systems must be assessing competencies in reading, writing, and arithmetic skills at the elementary and secondary levels, each school system must comply with all the provisions of Rule 14 in order to maintain approval by the State Board of Education. Rule 14 became effective in August 1975, and all school systems in operation on this date became subject to the provisions of the Rule. Hence, compliance with the provisions related to competency testing is monitored through this approval process.

Goals and Purposes

The inclusion of the competency assessment provisions in Rule 14 was intended to insure that students needing remediation in reading, writing, or mathematics would be identified both at the elementary and secondary levels.

Although the N-ABELS tests may be used by school systems in order to comply with these provisions, they were designed to serve other purposes as well. Specifically the tests are intended "(1) to assure the public that their stated priorities are taken seriously by the schools; (2) to help the public accept new programs by assuring mastery of essential skills; (3) to answer requests for accountability without imposing legal prescriptions and restraints; and (4) to clarify the continuing responsibility of each teacher to work toward competency in essential skills for each student" (Harlan and Egertson, p. 1).

Following the incorporation of the competency assessment provisions in Rule 14, the State Department of Education conducted workshops across the state on the provisions and means by which school districts could comply with them. The Department staff members also prepared a tentative set of competency assessment criteria describing the procedures that systems electing to develop their own competency tests in reading, writing and mathematics must follow. These criteria were never widely distributed, according to the Department, for lack of demand on the part of the school systems. The Department estimates that over 80% of the 1,100 school systems in Nebraska are using N-ABELS, in part because the resources and expertise required to develop a set of competency measures are not generally available at the local level. In the following sections, the development and design of the N-ABELS tests in reading, writing, and mathematics will be discussed.

Competencies

In developing the N-ABELS tests, the Nebraska State Department of Education distinguished among life-coping skills, basic skills, and essential learning skills. Life-coping skills are those applied skills such as balancing a checkbook and completing a job application, while basic skills are considered to be skills used primarily in a school setting. Essential skills, in turn, are considered "a subset of the 'basic skills' which are fundamental to continued learning. Essential learning skills are the tools of learning necessary for successful acquisition of competencies in the broader skill areas" (Administrative Manual, p. 1), and these are the skills that N-ABELS was developed to test.

During the summer of 1974, the State Department of Education organized three committees staffed by Department personnel, one in each of the areas of communications skills, mathematics skills, and inquiry skills. These committees met informally with school personnel as well as independently. A steering committee also composed of Department of Education staff members was established to select the essential skills from those suggested by the content committees. Essential skills were selected on the basis of the following six criteria:

(1) skills for which the school assumes the primary instructional responsibility,

(2) skills which are necessary for independence in learning,

(3) skills which engender wide public agreement concerning their importance,

(4) skills which are commonly introduced in the elementary school,

(5) skills which can be assessed by readily demonstrable student performance;

(6) skills which can be assessed without prescribing teaching methodology.

Twelve essential skills within the areas of communications, mathematics, and inquiry skills are defined and assessed by the N-ABELS. There are three essential skills in communications: reading (1), spelling (1), and writing (1). Mathematics comprises five skills, and four skills identified as inquiry skills are tested. Each skill is defined in terms of student performance, i.e., what the student must do to demonstrate mastery. These definitions are contained in Table 1.

TABLE 1

The Nebraska Assessment Battery of Essential Learning Skills: Skills Assessed and Skill Definitions at the Beginning of Each Test

Reading

The essential reading skill requires the student to demonstrate ability to translate printed symbols into speech by reading aloud a narrative selection of approximately 100 words constructed from the N-ABELS 2,000-word reading vocabulary list.

Writing

The essential writing skill requires the student to demonstrate the ability to write legibly, spell correctly, and punctuate appropriately from dictation a 100-word selection constructed from the N-ABELS 1,000-word writing vocabulary (the first 1,000 of the 2,000-word reading vocabulary list).

Spelling

The essential spelling skill requires the student to spell correctly 20 words randomly selected from 250 of the more difficult words in the N-ABELS 1,000-word writing vocabulary list.

Mathematics

(1) The essential mathematics skill 1 requires the student to read and write positive rational numerals through millions.

(2) The essential mathematics skill 2 requires the student to associate a given positive rational number using decimal, percent, and fractional notations for halves, thirds, fourths, fifths, eights, and tenths.

TABLE 1 (continued)

Mathematics (continued)

(3, 4) The essential mathematics skills 3 and 4 require the student to know basic facts for addition and multiplication.
(5) The essential mathematics skill 5 requires the student to use the standard operations of addition, subtraction, multiplication, division for whole numbers and decimal fractions.

Reference

(1) The essential reference skill 1 requires the student to use alphabetical order to locate words in the dictionary.
(2) The essential reference skill 2 requires the student to use alphabetical order to locate a topic in the encyclopedia and to locate a cross-reference for the same topic.
(3) The essential reference skill 3 requires the student to use the card catalogue and classification system to locate material by subject entry in the media center.
(4) The essential reference skill 4 requires the student to use the current official Highway Map of Nebraska to answer questions about: cardinal directions, physical and political features and to estimate distance using the map scale.

Standards and Standard Setting

Rule 14 mandates "mastery of a minimum acceptable performance in reading, mathematics, and writing" skills; N-ABELS identifies, defines, and establishes performance standards for mastery of 12 essential skills. Mastery is defined by the Department, as errorless performance on most of the tests.

While the provisions of Rule 14 require school systems to "utilize a competency measure which assesses mastery of a minimum acceptable performance in reading, writing, and arithmetic skills" at the elementary and secondary levels, these provisions do not specify what achievement level shall constitute evidence of "mastery" or of a "minimum acceptable performance." Hence, each school system must identify a standard as indicative of mastery in the course of developing or selecting competency measures.

For those school systems choosing to administer the N-ABELS tests as competency measures, mastery is defined by the State Department of Education as errorless performance on most of the tests. This standard is recognized by the State Department of Education as being unusual in the school setting, but, since it is one commonly associated with tasks outside of school and since it is applied only to skills that are, according to the Department, "unquestionably essential to the student," the rationale is that errorless performance is an appropriate and desirable standard (Administrative Manual, p. 6).

Target Groups and Testing Schedule

Although the State Board of Education, in the explanation of the competency testing provisions of Rule 14, recommends that assessment at the elementary level "begin for most students in grade 5," the State does not prescribe either what grades at each level are to be assessed or the testing schedule itself. These decisions are to be made in each school system in conjunction with the selection or development of the assessment instruments.

Those school systems using the N-ABELS tests do receive general guidelines regarding test administration in the form of an Administrative Manual. The State Department of Education recommends that, while some tests may be passed by students in the fifth grade, other tests "should be delayed until later." The State Department of Education suggests that the teacher is the most appropriate person to decide when the tests should first be administered and to determine how often each test should be given again. The Department does caution against giving a test before the student has been exposed to the particular skill. Thus, a teacher may find it helpful to coordinate administration of the tests with the teaching of the particular skills. "For example, the map reading skill test might be given in conjunction with an appropriate unit in social studies" (Administrative Manual, p. 9). The teacher is also considered to be the most appropriate person to decide when a student who failed a test should retake it.

It is important to note that the essential skills tested by N-ABELS do not have a grade level description. According to the State Department of Education, the selection of essential learning skills was based on objective criteria (see section on competencies) unrelated to grade levels, and, hence, it is "entirely inappropriate to associate a skill, or expectations of mastery of a skill, with a particular grade in school" (Administrative Manual, p. 6). Consequently, the teacher is the person who, on the basis of close and sustained contact with a child and familiarity with the curriculum is best able to decide both at what grade and at what point in the school year each test should be administered.

Test Instruments

Local districts have the option of using the N-ABELS tests or other Department-approved competency measures (either off-the-shelf or locally developed). Approximately four-fifths of the 1,100 schools are currently utilizing the N-ABELS. There are no available statistics on other instruments being used.

Content committees, composed of State Department of Education staff members, were responsible for suggesting essential communication, mathematics, and inquiry skills during the summer of 1974. These skills were then submitted to the steering committee, also composed of Department of Education staff members, who selected the essential learning skills on the basis of objective criteria (see section on competencies) in the fall of 1974.

Department staff members wrote and revised the tests during the summer of 1974. The tests are discussed below according to the skill area assessed.

Communication skills. In the area of communications, one essential reading skill and two essential writing skills are assessed. It should be noted that the description of each essential learning skill "provides in finite terms the complete testing domain or set of operations a student must know to demonstrate mastery of each skill" (Administrative Manual, p. 3).

The three communications skills tests utilize a vocabulary list of 2,000 words compiled during the course of the development of N-ABELS. According to the State Department of Education, the sources for this list included The American Heritage School Dictionary (Carroll, 1971) and the Basic Elementary Reading Vocabularies (Harris, 1972), but, since neither list precisely fit the needs of N-ABELS, a computerized comparison was made and the two lists were consolidated to form the N-ABELS 2,000-word vocabulary list. According to the State Department of Education, the primary advantage of developing a standardized list of words is that it facilitated test construction. The instruments "assess the actual spelling and reading knowledge of a finite set of words" (Harlan, Egertson, p. 3).

The reading skill test requires that the student demonstrate the ability to translate printed symbols into speech by reading aloud a narrative selection of approximately 100 words from the N-ABELS 2,000-word vocabulary list.

Of the two writing skill tests, the first, based on the first 1,000 words of the N-ABELS vocabulary list requires the student to "write legibly, spell correctly, and punctuate appropriately, from dictation, a 100-word selection" (Administrative Manual, p. 25). The second test focuses on spelling and requires the student to spell correctly 20 of the more difficult words randomly selected from the N-ABELS vocabulary list.

Mathematics skills. The mathematics committee drew upon the 48 Mathematical Competencies and Skills Essential for Enlightened Citizens developed by the National Council of Teachers of Mathematics in identifying those skills deemed essential. State Department of Education staff members then developed the items. The requirements for demonstrating mastery of each of the five skills tested are incorporated into the skill descriptions (see Table 1).

The first mathematics skill requires a student to read and write positive rational numbers through millions. Two exercises comprise assessment of this skill: (1) a student is given six written numbers and asked to read them aloud and (2) a student is asked to write six numbers read aloud to him. To assess the second mathematics skill, a student is required to use decimals, percents and fractions to answer two multiple choice items. Assessment of the third and fourth mathematics skills, i.e., knowledge of basic addition and multiplication facts, is accomplished through a student solving eighty addition problems and eighty multiplication problems. These tests are the only ones in the battery that are timed. A cassette tape presents the problems in three second intervals. The problems consist of adding or multiplying two one-digit numbers. The fifth mathematics skill requires a student to use the standard operations of multiplication, division, subtraction, and addition to solve problems. A student is given three problems per operation and asked to derive the answer. Decimal fractions are included.

Inquiry skills. There were four essential reference skills selected by the steering committee from among those suggested by the inquiry skills committee. The inquiry skills tests require students to locate information using various reference materials, including a dictionary, a map, and a card catalog. The skills descriptions are listed in Table 1.

The first reference skill requires a student to locate words in a dictionary. A student is first asked to write the alphabet and then is given two words to locate in the dictionary. The second reference skill, the ability to use alphabetical order to locate a topic in the encyclopedia and to locate a cross-reference for it, is tested by giving a student a topic to look up in the encyclopedia. The student must locate the topic and a cross-reference. In assessing the third reference skill, the ability to use a card catalogue, the student is provided with a topic and asked to locate two different types of material on the subject. A student is tested on his or her ability to use a highway map of Nebraska through ten open-ended questions.

The tests in the 12 skills were pilot-tested in the spring of 1975 with approximately 150 students spanning grades 5-12. Each grade was tested in all 12 essential skills. Minor revisions in wording and format were then made. The tests were first available for school systems in the fall of 1975. Since then, four forms for each test have been developed and are available to schools. In the fall of 1977, staff of the State Department of Education revised the format, rewrote the items for assessing the first essential writing skill, and rewrote the Administrative Manual.

Test Administration

The State Department of Education has prepared an *Administrative Manual* which provides general guidelines on test administration for teachers and administrators. It is recommended that the teachers decide when to administer an essential skills test based on the familiarity with the student and curriculum. The teacher is also responsible for deciding when to allow a student to retake a test, if he or she has failed on an earlier occasion. Although some tests may be administered to a large group, others must be given to individual students.

The circumstances under which a test is administered depends on the skill being assessed. For example, Mathematics Skill 3 (Addition Facts) and Mathematics Skill 4 (Multiplication Facts) are the only tests that are timed. These tests are available on cassettes from the Department of Education. The writing and spelling tests may be given using a tape player and headset so that a student may stop, start, or replay the tape as necessary.

The Department recommends that the teacher review the test result with the student, and suggest exercises if the student has not performed successfully. The Department also recommends that if, after taking two forms of a test, a student still does not demonstrate mastery, a teacher may "use judgment in awarding mastery" if he or she determines through questioning that the student knows the correct response for the error made (*Administrative Manual*, p. 10).

Scoring and Analysis

Mastery of each essential skill is defined as errorless performance. It should be noted that, in the case of timed tests, a student is allowed to make one error on each test and still pass it. The Department notes that "this margin of error is allowed because the tests are timed and errors may occur for reasons not related to mastery of the facts" (*Administrative Manual*, p. 36). Test administrators are also responsible for scoring each test and determining whether or not a student has demonstrated mastery. The outcome (pass/fail) is recorded on the test form and on the Student Progress Report Form, one copy of which is kept by the student and one by the school.

Reporting/Dissemination

The State Department of Education recommends that test results be recorded on the Student Progress Report Form. One copy of the form is given to the student and one is placed in his or her cumulative folder. It is also recommended that the teacher discuss the test result with the student. Other than providing general guidelines and recommendations concerning the reporting of N-ABELS results, the State Department of Education does not issue any formal reporting requirements; thus, for example, schools are not required to inform parents or the State Department of Education of the test results.

Use and Implications of Test Results

Consequences to students. The provisions of Rule 14 that require competency testing in elementary and secondary schools do not tie test performance to promotion or graduation. With respect to the N-ABELS tests, no specific consequences are prescribed. If a student fails to master a skill, he or she will be encouraged to work toward mastery. For instance, a teacher may assign specific exercises in that skill, and is responsible for determining when retesting is appropriate. The Department does suggest that, if a student has failed a test on two occasions and the teacher can determine through questioning that the student knows the correct response for the errors made, the teacher may "use judgment" in awarding mastery.

Consequences to programs. The State Department of Education has not collected specific information on consequences to programs.

Provisions for Special Populations

No specific reference to the application of the competency testing provisions to special populations is made under Rule 14. For those schools using the N-ABELS tests, the State Department of Education recommends that such tests be given to handicapped students, since, with the exception of the severely handicapped, most handicapped students are in programs that stress the development of the essential skills. Administrative modification may be made, if necessary, with such students, while the Department strongly recommends against administering the test to "any student who clearly is not able to demonstrate mastery of the skill" (Administrative Manual, p. 12). Department of Education staff members are available to provide assistance in adapting N-ABELS for use with handicapped students.

Nonetheless, it should be noted that the provisions of Rule 14 specify neither the exclusion nor inclusion of special populations in local competency testing programs.

Program Resources and Costs

General program staffing. The four committees formed by the Department which developed the N-ABELS volunteered their time during 1974-75. A three-quarter-time research assistant was hired for the summer of 1974 to aid these committees, and consultant services were provided on a monthly basis by the research assistant for the 1974-75 school year.

During the summer of 1975, one full-time staff member was hired to assist in conducting workshops on N-ABELS use. Workshops on the implementation of Rule 14 were also provided by the Department.

At present, seven members of the School Management Services division of the State Department of Education are responsible for assisting local school districts to comply with the provisions of Rule 14. Where appropriate this assistance includes helping school systems to implement N-ABELS.

Approximate costs and funding sources. Expenditures for N-ABELS test development, pilot programs, and test publication totaled $10,000. School systems may order test materials including answer sheets, cassettes, and administrative manuals from the State Department of Education. Both Title V funds and funds from the State Department of Education were used to develop N-ABELS.

Program Evaluation

No formal evaluation for the program is required under the provisions of Rule 14, and at present, none is planned.

Future Directions

The Department is interested in collecting data relating school success to N-ABELS performance and in identifying instructional techniques and materials that could lead to success on N-ABELS.

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WESTSIDE COMMUNITY SCHOOLS, OMAHA, NEBRASKA

During the 1972-73 and 1973-74 school years a long-range Planning Committee, organized by the secondary school principal of Westside Community Schools, developed recommendations concerning the testing of competencies in areas considered necessary for functioning successfully in modern society. Parents, teachers, and students from the elementary, junior high, and high schools reviewed the recommendations, and in June 1974 the School Board adopted a policy requiring high school students, beginning with the class of 1977, to pass competency tests in seven areas as a prerequisite to receiving a high school diploma. The areas are: reading, mathematics, written and oral communication, consumerism, problem solving, and democratic process. The program originated independently of the 1975 State action in minimum competency testing and is broader than the State program, which requires assessment in reading, mathematics, and writing.

Westside's program employs a combination of commercial and teacher-developed tests and is entirely administered by the secondary school principal and teachers.

Lesiglative and Policy History

Policy history. The minimum competency testing program in Westside Community Schools, Omaha, Nebraska, originated prior to and independently of the State's adoption of Rule 14, which requires local school systems to assess reading, writing, and mathematics achievement (see "Minimum Competency Testing in the State of Nebraska"). Since the State leaves program decision-making to the local districts, and since Westside's program is broader than what is required by the State, no changes have had to occur in the Westside program in order to concur with State requirements. This description, therefore, will focus solely on the development and characteristics of the Westside program, with no further reference to the State.

In the 1972-73 school year, a long-range Planning Committee was appointed by the secondary school principal for the Westside Community Schools. This Committee, made up of 15 secondary teachers and two administrators, reviewed and revised the philosophy and goals of the district and considered ways to achieve these goals. The Committee concluded that two major goals of an effective school system were the following: (1) to convey a certain body of knowledge, and (2) to teach certain skills. Competency testing was seen as one way of measuring whether the district had achieved this second goal.

During the 1973-74 school year the Committee proposed that secondary school students be tested in 11 competency areas: reading, mathematics, written communication, oral communication, consumerism, problem solving, democratic process, use of leisure time, career education, listening, and human and personal development. The Committee also specified the particular competencies in each area to be tested, and recommended assessment instruments and implementation procedures for each area.

In April 1974 the Planning Committee submitted these plans for review and revision to groups consisting of parents, teachers, and students, who were selected by the elementary and junior high school principals. These groups recommended that four of the original 11 competency areas be eliminated: use of leisure time, career education, listening, and human and personal development.

The long-range Planning Committee incorporated the suggestions of these groups, and, in June 1974, presented to the School Board a plan for testing competencies in the seven remaining areas: reading, mathematics, written communication, oral communication, consumerism, democratic process, and problem solving. The Committee recommended that passing tests in these competencies be added to requirements for graduation, and that the class of 1977 (sophomores at the time of policy implementation) be the first group subject to this additional requirement. The Board adopted a policy based on these recommendations in June 1974. The policy further stipulated that any student with a diagnosed learning disability is to be exempted from passing specific competencies on the recommendation of the specialist who made the diagnosis (such as a psychologist or speech therapist). The exemption is to be noted on the student's transcript; students identified as handicapped by specialists are required to take the competency tests, but do not have to pass them in order to graduate. Such students receive a diploma which indicates that the student has pursued a special course of study.

In the summer of 1974, upon receiving a grant from the Educational Service Unit, a division of the State Department of Education, 21 secondary teachers from Westside High School and 14 teachers from two neighboring school districts further refined the implementation procedures, and developed test items for those areas in which a standardized instrument would not be used.

Phase of implementation. Tests in all seven competency areas were first administered during the 1974-75 school year to sophomores. This group, the class of 1977, was the first class subject to the competency test requirement for graduation. All succeeding classes must also meet this graduation requirement. Competency tests for the classes of 1978 and 1979 were administered according to the implementation schedule prepared by the long-range Planning Committee. For schedules, see "Target Groups and Testing Schedule."

Goals and Purposes

General goals. The long-range Planning Committee saw competency testing as a way to determine whether the district was meeting its goal of teaching basic skills. Thus, competency testing is considered to be a reporting system designed to identify students who have not mastered the basic skills.

Specific purposes. Since the test results are tied to graduation, a specific purpose of the program is to certify to the public that students who receive a diploma have mastered these skills at least at the time they pass the tests.

Competencies

During the 1973-74 school year, the long-range Planning Committee identified the competency areas, developed specific competencies within each area, proposed assessment instruments to measure these competencies, and formulated implementation procedures. Committee members chose 11 competency areas which were considered necessary for functioning in a modern society: reading, mathematics, written communication, oral communication, consumerism, democratic process, problem solving, use of leisure time, career education, listening, and human and personal development. The specific topics to be assessed were selected on the basis of the same criterion.

In April 1974 the Committee submitted these plans for review to groups of parents, teachers, and students. For this review, the Committee had asked the building principals of the elementary and junior high schools to select parents who represented a variety of viewpoints and attitudes towards the school system. In addition, three teachers from each of the 12 elementary and three junior high schools participated, while three students from each junior high school, three students from the secondary school, and one student from each elementary school also reviewed the Committee's work. Parents, teachers, and students were organized into 11 groups, and each group reviewed one competency area. As a result of the recommendations of the review groups, the following areas were eliminated: career education, human and personal development, listening, and the use of leisure time.

In June 1974 the Committee presented a plan which called for testing competencies in seven areas--reading, mathematics, written communication, oral communication, consumerism, democratic process, and problem solving--to the School Board; and the School Board adopted a policy that stipulated that students in Westside High School, beginning with the class of 1977, must pass competency tests in these areas in addition to meeting all of the other graduation requirements in order to receive a high school diploma.

Both the long-range Planning Committee and the review groups considered seven competencies to be prerequisites for successful functioning in modern society. The competency areas reflect an emphasis upon school skills (e.g., reading, mathematics) and life skills (consumerism, problem solving). Table 1 contains a complete listing of the topics tested in each competency area.

Standards and Standard Setting

In the summer of 1974, following the adoption of the School Board policy, 21 teachers from Westside High School and 14 teachers from two neighboring school districts further refined the assessment and implementation procedures. There were seven groups, each composed of three Westside teachers from Westside High School and two from the neighboring districts; each group was responsible for one competency area. All groups were charged with preparing the assessment instruments for administration in the coming school year. Nonetheless, the specific tasks that each group performed depended upon how much of the groundwork had been laid by the long-range Planning Committee and the review groups. In cases where a standardized test was to be given, both the instrument and the standard of mastery had already been determined. In other cases, the group of five teachers developed items and established a passing score. The method of setting a standard and the standard itself are described below according to competency area.

TABLE 1

Competency Areas and Subskills Adopted in Westside Community Schools

Reading

Reading Comprehension
Vocabulary

Mathematics

1. Problems with whole numbers
2. Number value and place value
3. Conversions with decimals and percents
4. Addition, subtraction, and multiplication with fractions
5. Addition, subtraction, multiplication, and division with decimals
6. Estimating answers to work problems
7. Recognizing kinds of lines
8. Recognizing geometric figures
9. Computing perimeters of polygons
10. Computing areas of polygons
11. Using measures--simple conversion, i.e., inches to feet
12. Using measuring devices
13. Rounding off measurements
14. Reading maps
15. Probability problems (chances)
16. Reading graphs
17. Working with money problems

TABLE 1 (continued)

Written Communication

Student essays must follow standard usage for the following conventions:

1. Spelling (use of a dictionary is encouraged)
2. Period
   a. Terminal
   b. Abbreviations
3. Question mark
4. Commas in a series
5. Contractions
6. Capitalization
7. Sentence structure (i.e., subject and verb must be included, no run-on sentence or sentence fragments)
8. Possessive case
9. Subject-verb agreement in person and number
10. Antecedent-pronoun agreement in person, number, and gender
11. Syntax (conventional order of words)

Oral Communication

The student is able to:

1. introduce the main idea and state the purpose of the communication;
2. present two or more points with supporting material;
3. use a conclusion to summarize his presentation;
4. use clear, understandable English;
5. speak loudly enough to be easily heard;
6. look at the listener most of the time;
7. respond confidently to questions.

TABLE 1 (continued)

Consumerism

1. Money management
2. Credit
3. Insurance
4. Taxes
5. Consumer buying decisions
6. Consumer protection

Democratic process

Students must demonstrate understanding of the United States Constitution, of the functions, roles, and limitations of local, state, and national governments, and an understanding of democratic political action and individual responsibility.

Problem Solving

Ability to:

1. recognize a problem;
2. state a hypothesis;
3. state questions relevant to the problem;
4. locate sources and collect information from those sources;
5. utilize information in forming tentative conclusions.

READING: Both English teachers and teachers of reading served on this group. The long-range Planning Committee recommended that reading comprehension and vocabulary be tested using the Gates-McGinitie (Survey F) test. This instrument had been in use in the district over the past ten years in conjunction with the district-wide testing program. In order to set a standard, members of the long-range Planning Committee reviewed previous test results and suggested that student mastery in this area be set at a composite score of 40 or above. Since the mean composite score is 50 with a standard deviation of 10, a student is considered to be reading at or above a remedial level if his composite score is 40 or above.

MATHEMATICS: On the recommendation of the Planning Committee, two tests in this competency area are administered, both of which are based on the Beckmann-Beal Mathematical Competencies Test for Enlightened Citizens. The first administration, which occurs in grade 9, is for the purpose of diagnosing student deficiencies and prescribing the appropriate remediation as necessary (see "Consequences to students").

The graduation test in mathematics is to be administered in grade 11. The eleventh-grade test, like the ninth-grade test, assesses student mastery of the 17 competencies which the Committee selected as the basic mathematical skills from the 48 competencies on the Beckmann-Beal Test. Each of the 17 competencies is tested by three items; a student must give correct answers for at least two of the three items for each competency, and must demonstrate mastery of every competency in order to pass the test.

WRITTEN COMMUNICATION: The long-range Planning Committee recommended that writing be assessed by asking the student to prepare a writing sample. The student must write three related paragraphs, and each paragraph must contain a minimum of four sentences. Students are allowed a maximum of five errors, with the stipulation that no more than three errors be made in any one of the basic conventions, such as spelling or capitalization.

ORAL COMMUNICATION: To assist in assessing this competency, the group of teachers prepared orientation materials for all teachers, since each homeroom advisor is responsible for conducting the oral communication competency test. The material lists the specific criteria which a student must satisfy in order to pass this competency.

CONSUMERISM: The group of five teachers assigned to this competency developed 40 items to measure the six topics in this competency area. The group also set the standard for mastery: a student must respond correctly to at least 36 of the 40 questions to demonstrate mastery.

DEMOCRATIC PROCESS: A group of social studies teachers developed the items and set the standard for this competency test. The test consists of 45 true/false statements. Mastery requires correct responses to at least 35 of the 45 statements.

PROBLEM SOLVING: In addressing this area, a group of five social studies teachers specified the five skills a student must demonstrate to satisfy the competency requirement. These skills are tested by asking a student in a social studies course to define a problem, and to propose a solution after a review of relevant materials. In the summer of 1974, the group of teachers prepared guidelines to assist social studies teachers to evaluate student performance. To achieve mastery in this area, a student must demonstrate the five problem solving skills to the teacher's satisfaction.

Target Groups and Testing Schedule

The rationale behind the testing schedule is to provide students who fail the competency tests with sufficient time for remediation and retesting prior to graduation. The testing schedules for each competency area were set by the Planning Committee, the review groups, and the seven groups of teachers who prepared the assessment instruments in the summer of 1974. It should be noted that testing for the first class subject to the competency test requirement (i.e., the class of 1977) did not follow the schedule outlined below. These students were first tested in all the areas in their sophomore year, the 1974-75 school year. This group then had two years in which to pass the tests prior to graduation. In contrast, the class of 1978 and succeeding classes have been tested according to the schedules noted in Table 2.

TABLE 2

Testing Schedule for Seven Competency Areas

Grade	First Semester	Second Semester
9		Reading Mathematics (diagnostic)
10	Writing: fourth week of every quarter	Writing: fourth week of every quarter
11	Mathematics (regular competency test) Democratic Process Consumerism Problem Solving	

Test Instruments

As previously discussed, seven groups of teachers were responsible for preparing the test instruments for implementation in Westside's program. What this involved depended upon what groundwork had been laid by the long-range Planning Committee, but activities ranged from developing the test instrument in a particular competency area to specifying, in another, only the administration procedures.

In reading and mathematics, the Committee selected commercial tests. Four forms of the Gates-McGinitie (Survey E) test are currently being used to measure reading comprehension and vocabulary. The Beckmann-Beal Mathematical Competencies Test for Enlightened Citizens is administered as the ninth-grade diagnostic mathematics test, and serves as the basis for the eleventh-grade competency test. The teacher group developed six forms of the competency test to measure a set of 17 competencies that the Committee selected from the Beckmann-Beal test. Each form consists of three multiple-choice items per competency objective.

In the remaining five competency areas--written communication, oral communication, consumerism, democratic process, and problem solving--the teacher groups in each area developed all assessment instruments and procedures. For written communication, students must write three related paragraphs of no less than four sentences each on any subject. For oral communication, students must deliver a two- to three-minute talk before an audience of fellow students and the homeroom advisor. A test of 40 multiple-choice questions is used to assess six topics in consumerism. Four forms of a 45-statement true/false test are used to assess student understanding of democratic process. Finally, in order to demonstrate proficiency in problem solving, students must select a problem in social studies and carry out a series of steps to reach a solution. The teacher group defined the nature of the steps that students are to apply to their selected problems, and social studies teachers certify student competency on the steps.

Three tests have gone through extensive revision on the basis of assessment results: consumerism, mathematics, and democratic process tests. During the 1975-76 school year, the teacher group in the democratic process area added new items and deleted others determined to be too difficult or too easy on the basis of the previous year's results. Each of the three tests has been revised every summer since the program's inception in 1975; the one exception is the mathematics test, which was not revised in the summer of 1979.

Test Administration

The competency tests are administered in either a large-group setting or in the classroom. Students who fail one or more tests may retake them when the tests are offered again in a large-group setting, or may contact the teacher or resource specialist to arrange for an individual testing session. Typical administration procedures for each test are described below according to competency area.

READING: This test is first administered by a reading specialist to ninth-graders in the second semester in a large-group setting. Transfer students are tested individually. The reading specialist receives a list of new students at the beginning of each school year, and is responsible for contacting the students and administering the test.

MATHEMATICS: The diagnostic test is administered in a large-group setting by mathematics teachers to freshmen during their second semester. Since the ninth-grade test is used only as a diagnostic instrument, it is given only once. Mathematics teachers also administer the competency test given to juniors during their first semester in a large-group setting. If a large number of students fail the test, more large-group testing sessions will be scheduled to provide opportunities to retake the test. However, if only a small number of students fail the test, then a student can retake the test simply by scheduling an appointment with the classroom teacher or with a mathematics resource person.

WRITTEN COMMUNICATION: The writing test is administered in the fourth week of every quarter in every sophomore English class by the classroom teacher. Students are allowed one classroom period to complete the test, and may reschedule with an English teacher as often as necessary.

ORAL COMMUNICATION: Each homeroom advisor is responsible for testing sophomores in his homeroom in oral communication. Any student who fails this test must arrange for an opportunity to retake it with the advisor. The student is required to present a two- to three-minute talk before the advisor and other students in the homeroom. A student may also arrange to take the test at some other time than the homeroom period. In such a case, the student must make the arrangements to assemble an audience that will include fellow students.

CONSUMERISM: The consumerism test is administered by business teachers to juniors in their first semester in a large-group setting. Two more large-group testing sessions are scheduled after this initial administration to give students who have failed the test a chance to take it again. Also, a student may arrange with a teacher aide to take the test during a free period.

DEMOCRATIC PROCESS: All juniors first take the competency test in this area during a required course in United States history in the first semester. The social studies teachers for this course administer the test in a classroom period. Students who fail the test may arrange with their respective history teachers to take the test again. Students who have not passed the competency test by the end of the course must arrange to retake the test. To do this, a student must contact a social studies teacher assigned specifically to work with seniors on this competency.

PROBLEM SOLVING: Students take this test during the first semester of the junior year. Social studies teachers who teach the United States history course are responsible for administering the test, which is usually assigned in the form of a homework exercise for the course and may require as much as a week to complete. Students who fail to perform the assignment to the satisfaction of their teachers must arrange a retake. Students who have not passed this competency test by the end of the course must make an appointment to retake it with one of the social studies faculty assigned to help seniors with this competency.

Scoring and Analysis

The following four competency tests are scored by computer: the Gates-McGinities reading test, the mathematics test, the consumerism test, and the democratic process test. The diagnostic test in mathematics is also scored in this fashion. The district pays a monthly fee to the Educational Service Unit, which provides the scoring services.

Competency tests in the areas of written communication, oral communication, and problem solving are scored by the classroom teachers who administer the tests.

For the tests scored by computer, results are reported directly to an aide who is in charge of the student competency records. The aide then reports the results to the student and to the appropriate staff members. The student receives a test score; the subject teacher receives information about the specific competencies which each student passed or failed. If the test results indicate that a student is in need of remediation, then teachers of remedial classes are notified.

In the area of oral communication, the teacher-advisors tell the student whether he has passed or failed, and in problem solving, the classroom teachers notify the students; these results are also reported to the aide in charge of record keeping. After the written communication test, the student is told whether he passed or failed, and how many mistakes he made. The teacher also notifies the aide of the outcome.

Reporting/Dissemination

Results of the competency tests go to students in the manner described in the preceding section.

Parents are informed of test results in their conferences with teachers and by means of letters. The parents and teachers of a student meet for conferences which are scheduled to take place after the first nine weeks of every school year have elapsed. Parents of a junior or a sophomore receive letters which inform them of their child's competency test results at the beginning and end of the school year. The parents of a senior receive that student's competency test results at the beginning and the end of the first semester. Moreover, on April 1 the parents of every senior student who has not completed the competency requirements are sent a registered letter containing an update of the student's competency test results.

Use and Implications of Test Results

Consequences to students. Students must pass all the competency tests in order to receive a high school diploma. The class of 1977 was the first group subject to this added requirement for graduation.

The consequences of failing a competency test depend upon the area involved. A student who has scored below 40 on the Gates-McGinitie reading test is assigned to a remedial class, which provides remedial instruction and opportunities to retake the test.

Since the mathematics test is administered in grade 9 as a diagnostic instrument and in grade 11 as a graduation test, arrangements for dealing with student failure in this competency area are somewhat more complicated. A ninth-grade student who misses 11 or more of the 17 competencies on the diagnostic test is assigned to remedial and review work with a mathematics specialist; one who fails six to ten competencies must work either with his mathematics teacher or a mathematics specialist to review those competencies; one who fails one to five of the competencies is expected to review them in the regular mathematics class. An eleventh-grade student who fails one or more of the 17 competencies on the graduation test must review those competencies and then arrange to retake the test.

A student who makes five or more errors in the writing sample is provided with remedial exercises in the English classroom, and may retake the examination during the fourth week of every quarter.

Students who fail the consumerism test may take a consumer economics course and/or review the booklet developed by the teacher committee for this competency area. To retake the test, a student can have the aide in charge of record keeping administer the test, or the student can take the test again in a regularly scheduled large-group session.

Failure in the democratic process test means that a student must review the materials provided by his history teachers, and then arrange to take the test again.

A student who fails the problem solving test may retake the test by completing similar exercises which are to be assigned by his social studies teacher; the teacher and the student together must decide when the student is ready to retake the test.

Consequences to programs. No specific changes in the curriculum were anticipated or planned as a result of the introduction of competency testing. Administrators note that one consequence of instituting the competency test in consumerism is an increase in the number of sophomores who enroll in the course to prepare for the competency test.

Provisions for Special Populations

In the policy adopted by the School Board in June 1974, two classes of special population students were identified: (1) students who are classified by a specialist as having a learning disability, and (2) all other special education students (e.g., the educable mentally retarded). Specialists working with the learning-disabled student can recommend that a competency area or areas be waived as requirements for graduation. In those areas in which the requirements have not been waived, the student must pass the competency tests. In such cases, the student receives a regular diploma, but the areas in which the requirements were waived are noted on the student's transcript.

All other special education students must take the competency tests, but do not have to pass them in order to graduate. These students receive diplomas which indicate that they have taken a special course of study at Westside.

Program Resources and Costs

General program staffing. The long-range Planning Committee consisted of the principal and vice-principal of the high school, 12 department heads, and three classroom teachers. All members were appointed by the secondary school principal. The groups which reviewed the Committee recommendations on competency testing were composed of teachers, parents, and students from both the elementary and junior high schools. In the summer of 1974, 21 teachers from Westside High School and 14 teachers from two neighboring school districts further refined the testing instruments and procedures. Since the introduction of the program, a half-time aide in reading has joined the staff; an additional mathematics teacher and an aide in charge of record keeping have also been hired.

Approximate costs. A grant of $6,300 from the Educational Service Unit provided salaries for the teachers who worked during the summer of 1974 to implement the program and to develop test instruments. No other program costs have been calculated. One administrator estimated that over $15,000 had been spent during the 1974-75 school year, which was the first year of program development.

Funding sources. Except for the initial grant from the Educational Service Unit, all program funds came from the local school budget.

Program Evaluation

No formal evaluation of competency testing at Westside High School has been conducted or is contemplated. One school administrator tested the 1976 senior class using instruments similar to the competency tests, and plans to compare these scores with the scores which the 1977 senior class received on the competency tests. No target date for the completion of this study has been set.

School officials estimate that 5-10% of the senior class has had difficulty in passing one or more of the competency tests. Results from the class of 1977 revealed that eight students out of approximately 1,600 did not receive high school diplomas; five lacked both the necessary credits and the required competencies, and three had not completed the required competencies. In the class of 1978, six students did not receive diplomas because they lacked both credits and competencies. In 1979, the credit requirement was increased, and 22 students did not receive diplomas; 21 of these were also lacking requisite competencies.

Future Directions

School administrators will appoint another long-range Planning Committee within the next two years. The members of this second Committee will study what effects, if any, the competency tests have had upon student achievement. No criteria for evaluating impact of the program upon achievement have as yet been established.

References

Competency Tests prepared by Westside High School, Omaha, Nebraska

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NEVADA

Minimum competency testing in the State of Nevada is the result of a joint effort among local school districts and the State Department of Education. In 1977 the legislature enacted an assembly bill requiring proficiency examinations for grades 3, 6, 9, and 12, and to comply with this bill, the State Board of Education mandated a minimum competency-based testing program for the content areas of reading, writing, and mathematics. The main goals of the program are to ensure a satisfactory level of competency achievement in the specified content areas for all graduating high school students and to identify students at earlier grades who appear to be having difficulties with the minimum competencies. Local school districts are responsible for test administration, scoring, reporting, and most importantly, remediation efforts needed by specific students identified by the competency testing program. The testing program in reading, writing, and mathematics for grades 3, 6, and 9 is in current operation at the local level; the grade 12 program will be operational in school year 1981-82.

Legislative and Policy History

In January 1976 the Nevada State Board of Education began to explore the feasibility of a competency-based education program. The original impetus for this effort came from professional concern about the national trend of declining test scores. The Board passed a mandate instructing the Nevada Department of Education to undertake a study to determine "the feasibility of establishing policies and regulations for the issuance of the high school diploma based on competency measures . . ." (SBE, 1977, p. ii). After receiving the results of this study in July 1976, the Board directed that a competency-based program be developed. In November 1976, the Superintendent of Public Instruction appointed an advisory committee to review the the progress of the competency-based program and to make recommendations. Committee members were drawn from business and industry, local school districts, the state legislature, educational associations, and higher educational institutions. Two task forces were also appointed by the Superintendent. Task Force I was composed of reading, writing, and arithmetic teachers from every school district in Nevada and was charged with developing minimum competencies in those areas necessary for high school graduation and the skills related to those competencies. A second task force was appointed by the Superintendent to develop measurement techniques and policy recommendations for program implementation. Task Force II was composed of teachers, counselors, principals, and research personnel from all school districts in Nevada. The three groups presented a final report to the Board in June 1977.

Almost concurrently, the Nevada State Legislature, stimulated by national concern for declining school achievement, enacted Assembly Bill No. 400 which became NRS Chapter 389.015. The bill, which was enacted on July 1, 1977, directs local school districts to administer proficiency examinations in reading, writing, and mathematics to all students before the completion of grades 3, 6, 9, and 12. Since the final report of the feasibility study had indicated a broad base of public support for the proficiency examinations, the Board decided to integrate and utilize, work already completed for the Competency-Based High School Diploma Program.

Phase of implementation. The Board mandated the following phase-in period to comply with NRS Chapter 389.015: standard proficiency tests in reading, mathematics, and language must take place during grades 3 and 6 beginning in 1977-78; tests in reading, arithmetic, and writing must take place during grade 9, beginning 1978-79; and for grade 12 proficiency tests in reading, arithmetic, and writing must be in place by 1982. The grade 12 tests will be based on the same set of competencies as the grade 9 tests. The class of 1982 will be the first class whose diplomas will be contingent upon passing the proficiency tests as well as meeting all other high school graduation requirements. Students who were in grade 9 at the time the law became effective are exempt from the requirements.

Goals and Purposes

General Goals. The proficiency examination program has two primary goals. The first goal is to restore public confidence in the Nevada high school diploma by ensuring that students possess basic competencies. The second goal of the program is to identify as early as possible, students who need remediation in the competencies tested. Remedial work for these students can then be provided at the local level to ensure satisfactory competency achievement for all graduating high school students.

Specific Purposes. More specific purposes of the program are to provide information to ninth-graders about their level of achievement against a set of objectives which they must need in order to receive a high school diploma; and to ensure that students who receive the high school diploma will possess the life skills necessary for employment. This program, however, will not determine grade promotion. That will be determined, as always, by teachers, principals, and parents at the immediate local level.

Competencies

The program's proficiency examinations for grades 9 and 12 will assess student achievement in three areas mandated by the state legislature: reading, writing, and arithmetic. Competencies in these areas were developed by Task Force I made up of 35 classroom teachers of arithmetic, reading, and writing appointed by district superintendents from every Nevada school district. The members of this Task Force I met in three two-day work sessions to identify specific skills in the three content areas.

Table 1 presents the skills defined by this group and refined by Task Force II, charged with developing the enabling objectives, measurement strategies, and policy recommendations. Membership in Task Force II consisted of teachers, counselors, principals, research and development personnel, and administrators.

For grades 3 and 6, the competencies assessed are those measured by the Stanford Achievement tests in mathematics computation, reading comprehension, and language.

Standards and Standard Setting

The Board adopted uniform test standards as recommended by the Department of Education. Since their purpose was to assess proficiency only, and not to determine promotion, the standards reflect what the Department considered to be reasonable expectations of student performance. Moreover, the Department took into consideration the length and comprehensiveness of the tests by formulating the competency levels in terms of minimum rather than complete requirements.

TABLE 1

Specific Skills Defined for High School Graduation in Three Content Areas

Arithmetic

Students must demonstrate the ability to use addition, subtraction, multiplication, division, and practical problem solving skills.

(a) add money
(b) add fractions (2 objectives)
(c) subtract money
(d) subtract fractions (3 objectives)
(e) multiply money
(f) multiply fractions (2 objectives)
(g) divide money
(h) use percent (2 objectives)
(i) find perimeter and area (2 objectives)
(j) translate words--numbers (3 objectives)
(k) make change
(l) identify time and date (2 objectives)
(m) use units of measure (3 objectives)
(n) compare numbers (2 objectives)
(o) use tables and graphs (2 objectives)

Reading

Students must demonstrate mastery of the listed reading skills as measured on an evaluative instrument.

(a) comprehension (4 subskill objectives)
(b) order and sequence (3 subskill objectives)
(c) reference skills (3 subskill objectives)

Writing

Students must demonstrate those specific skills necessary for clear, purposeful communication.

(a) expository paragraph
(b) business letter

To achieve proficiency for grades 3 and 6, students must score in stanine 3 or above on the Stanford Achievement Tests in mathematics computation, reading comprehension, and language. For grades 9 and 12, students scoring 4 out of 6 items correct per specific skill in reading and arithmetic are considered proficient. However, a student may also achieve overall proficiency if high achievement in one area compensates for by low achievement in another. In order to compensate for low achievement in one area, however, the student must achieve an overall score of 75% correct on the examination. On the writing test, an average score of 2 or better on a 0-4 holistic scale is considered proficiency in writing.

Target Groups and Testing Schedule

Proficiency examinations are currently administered to grade levels 3, 6, and 9 in the State of Nevada. By 1981-82 grade 12 proficiency examinations will be developed and made available three to four times to students in grade 11. Students will have a minimum of six opportunities during the last two years of high school attendance to successfully achieve the minimum competency requirements.

All testing takes place within a one-month span. In the school year 1978-79, students in grades 3 and 6 were tested during the period March 26 to April 30, 1979. Students in grade 9 were tested in reading and arithmetic during the week of April 23-27. In writing, all ninth graders were tested on one day, March 20, 1979, with make-up forms administered on March 27

Test Instruments

After a thorough comparison of available assessment instruments with the skill levels identified by Task Forces I and II, an ad hoc committee of the Department of Education recommended the purchase of two Stanford Achievement Tests (SATs), on the grounds that the match between SAT items and the skill areas established by the task forces seemed the best of all commercial tests. For grade level 3, the SAT: Primary Level III examinations in mathematics computation, reading comprehension, and language were selected by the Department and approved by the Board. For grade level 6, the SAT: Intermediate Level II examinations in mathematics computation, reading comprehension, and language were selected and approved.

For grade level 9, local teachers developed tests in reading and mathematics; consultants from American College Testing (ACT) assisted them by providing technical support and training item writers. A pilot test was administered in November 1978 and screened for "bias" according to ACT procedures. A total item bank of 650 mathematics items generated four forms of 180 items; each one took longer than 2½ hours for students to complete. A total item bank of 350 reading items generated four forms of 160 items each that took 1½ hours for students to complete. A high reliability was demonstrated across forms. In their final form, the ninth-grade tests now consist of 90 items in mathematics assessing 15 skills and 60 items in reading assessing 10 skills, and these items were selected within a specific range of difficulty. For the writing sample, Educational Testing Services (ETS) helped the Department to select one expository paragraph exercise and one business letter exercise and to score holistically on a 0-4 scale, with 2 set as the minimum competency achievement. The first administration of the grade 9 Nevada proficiency exams occurred in Spring 1979. The test for grade 12 will be constructed from the grade 9 item bank, but the test will not be developed until the data analysis of the grade 9 test is completed. Selected items will again be within a specified range of difficulty, and care will be taken to equate the forms of grade 12 test.

Test Administration

Local school districts are responsible for administering the measurement instruments. The Department standardizes administration procedures and selects administration dates to assure test uniformity and security, but the local districts make decisions about such test irregularities as cheating. Approximately 95% of all students actually take the tests--the absentee rate goes down on test days--but no provisions, with respect to the reporting of statewide results, have been made for the case of a student absent on both the test days and the makeup days. The local districts are urged by the Department to identify such students and provide them with opportunities to take the tests.

Scoring and Analysis

For grade levels 3 and 6, local school districts have their own tests scored, either by other districts or by the test publisher. The Department receives Stanine distributions from the local districts. Stanine 3 or above is the required minimum competency level achievement.

To score the grade 9 Nevada proficiency examination, ACT provides an analysis of the reading and arithmetic tests; ETS-trained teachers holistically score the writing sample at the Department. Score data is provided directly to the local districts who then interpret the data. Overall performance is reported by skill area, and score breakdowns are computed on a skill-by-skill basis which provide the number of items for each objective answered correctly by each student, the total raw score for each student, and the percentage of students who achieved competency in each skill.

Reporting/Dissemination

Each local district may disseminate information about the scores as it deems appropriate. Districts must report test results to the Department by June 30 of each year. The Board uses the statewide results to generate questions and discussions about the program. There is an annual statewide report which enters into the public domain.

Use and Implications of Test Results

Consequences to students. Since a primary goal of assessing minimum competency in grades 3, 6, and 9 is the identification of specific deficiencies for remedial purposes, a student is not penalized for failing the examinations. Local districts must determine what remedial study is appropriate for students who do not achieve minimum competency levels. As of 1982, however, all students must pass the twelfth-grade assessment in addition to accumulating the state-required 19½ credits with passing grades and meeting any additional local requirements before the high school diploma may be awarded. Students who fail the twelfth-grade assessment will receive only a certificate of attendance for the completion of high school.

Consequences to programs. The Nevada program emphasizes local autonomy in that it allows the school district to make its own evaluations, curriculum changes, revisions of course content, and instructional activities in response to local needs. However, none of these activities is mandated by the State. The State plans the role of a coordinator or leader for the local districts, the real decision-making authority rests with local authorities.

Provisions for Special Populations

Special provisions are to be provided for special education students only on a case-by-case basis. No exemptions from the required demonstration of competency shall be granted, but equivalent testing procedures will be provided for special education students desiring to take the tests. The bill only requires graded students to be tested, and special education students are considered to be non-graded. The Department does, however, urge local schools to provide proficiency testing experiences to special education students if they so desire.

Program Resources and Costs

General program staffing. In Nevada, the State Board of Education, the Department of Education, the Superintendent of Public Instruction, and the state legislature have provided much of the leadership in the initial stages of developing this minimum competency testing program. Within the Department of Education, the Technical Services Division has primary responsibility for the planning, research, development, and evaluation of this program. The Board and Superintendent act on the recommendations of the Department. Other resource personnel in the Department serve as needed, on a flexible time basis, in such areas as field testing and curriculum activities. Local districts provide their own personnel for test administration and remediation.

Approximate costs. The developmental work completed in 1977 cost the Department slightly less than $30,000. This figure does not include personnel costs such as salaries, salary costs, and overhead.

In 1979, approximately $41,000 was invested in the ninth-grade test development and another $36,000 for test materials, scoring, and reporting. The Department retreived this $36,000 from local districts by billing them at the rate of $2.95 per student taking the examination. The test costs for grades 3 and 6 were the responsibility of the local districts.

Maintenance costs of the program at the State level are expected to be approximately $20,000 per year for the development of additional test forms once initial test development has been completed. Remediation costs are the responsibility of the local districts.

Funding sources. Initial funding was mainly the responsibility of the local school districts and the Department of Education, the latter through the use of Title IV-CS funds. The 1979 legislature has allocated $110,000 to the Department to cover test development costs over the next two years. This sum will cover program maintenance costs at the state level, but it will not be used to cover any remediation costs.

Program Evaluation

Since the program is in its initial stages, officials are compiling and building a data base to help guide future research, development, and evaluation activities. An initial formative evaluation has been implemented and the following results have been informally reported.

(1) Test reliability figures indicate that both the internal test development process and external technical assistance have been successful in generating reliable ninth-grade tests.

(2) Less rigid deadlines for development, administration, and scoring of tests are needed unless a broader base of financial support is provided.

(3) The pilot testing program worked well.

(4) The reading test has achieved its objectives.

(5) More information is needed concerning course and curriculum offerings, dropout rates, and retention rates.

Future Directions

Since the implementation of the minimum competency testing program in Nevada, a concentrated effort has been made to ensure test reliability and validity. The writing sample, for example, has been extensively revised, and the number of topics has been narrowed down. The Department now plans to evaluate the holistic scoring approach and to set up procedures to lessen scoring discrepancies between test readers. Also, the search continues for more effective method of identifying fast, accurate test readers.

Because test administration is a critical component in the success of any minimum competency-based testing program, well-trained test administrators are necessary to guide testing efforts. The Department, recognizing a need for better-trained test administrators, is currently considering ways of effectively meeting that need.

Much of the responsibility and ultimate success of Nevada's minimum competency testing program rests with the local school districts. However, cooperation between the Department and the larger school districts can lead to the development of cost-effective testing procedures, since these local districts have the hardware capability for efficient and cost-effective levels of operation. The coordination and utilization of these capabilities on a statewide basis would benefit everyone.

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NEW HAMPSHIRE

Minimum competency testing will be achieved in the State of New Hampshire through implementation of a statewide Educational Accountability Plan. The primary purposes of the plan are the improvement of student performance and the introduction of the concept of accountability into educational planning at the local level.

The plan, which will be fully implemented by June 1981, calls for a yearly monitoring of student performance and a five-year evaluation of student outcomes and related performance indicators. The plan also calls for the development of local management plans stipulating how improvements in performance are to be achieved. New Hampshire's Accountability Plan is being implemented through the combined efforts of the Accountability Unit, which is part of the State Department of Education and responsible to the Commissioner of Education, and a 19-member advisory group called the Joint Management Council. The plan calls for competency testing in English language arts, mathematics, United States government and history, and New Hampshire government and history, but does not limit testing to those areas. All students in grades 4, 8, and 12 are the target groups for testing. The predominant feature of the New Hampshire Plan is local involvement in all stages of design, implementation, evaluation, and planning. Local Planning Groups formed at the district, union, or regional level, in cooperation with the Accountability Unit and the Joint Management Council, are responsible for all phases of the implementation of minimum competency testing in New Hampshire.

6

Legislative and Policy History

Policy history. In October 1977, at the initiative of the Commissioner of Education, the Department of Education developed the New Hampshire Educational Accountability Plan in order to improve student performance through introducing the concept of accountability into educational planning at the local level. The Commissioner established the administrative structure of the plan by setting up the Accountability Unit, an office created to implement the accountability plan. In December 1977, the Co-Directors of the Accountability Unit requested nominations from the following organizations within the State: The New Hampshire Education Association, the New Hampshire State Federation of Teachers, the

New Hampshire School Boards Association, and the New Hampshire Association of School Principals. The Co-Directors drew upon these nominations in establishing a 19-member Joint Management Council to serve as an advisory group to aid in the implementation of the plan. The Joint Council consists of the Co-Directors of the Accountability Unit, five teachers, four administrators, four principals, and four School Board Members. The primary purposes of the Council are:

(1) to recommend policies and procedures to the Commissioner and the Board;

(2) to provide accurate information on accountability planning and implementation;

(3) to plan and implement orientation activities for superintendents, local boards, principals, and teachers;

(4) to act as information sources on accountability for the different geographic regions;

(5) to present concerns of their regions to the Council;

(6) to make recommendations to State consultants and field agents for solving regional and local problems with the plan;

(7) to act as liaison with educational facilities and professional groups;

(8) to act as an impartial body to hold hearings on disapproved plans, and make recommendations to both the State and local districts that will help them win approval for their plans.

In addition, two groups of Department consultants, jointly called the Accountability Task Force, will be available to assist local districts in developing competency testing plans and in developing essential student outcomes for the testing program.

The plan was developed to improve student performance and to assist in the development of an accountability structure in educational planning at the local level. The Joint Management Council of the Department of Education has established basic requirements for choosing the competency areas and test instruments, and has developed guidelines and a procedure for the development of accountability plans by local units. The plan requires that a Local Planning Group (LPG) be organized to oversee the implementation of the competency program. The creation of a Local Planning Group involves several steps:

(1) an orientation by the Joint Management Council for superintendents, school boards, principals, and teachers relative to the development of the local accountability plan;

(2) establishment and adoption by the school board of procedures governing the development and implementation of an accountability plan that will include the Local Planning Group;

(3) development by the school board of a process for identifying and selecting participants for the Local Planning Group, including representatives from school board members, administrators, principals, department chairpersons, teachers, students, members of the community, and parents.

Once organized, the Local Planning Group is to be responsible for the development and implementation of the local accountability program.

The legislative justification for the adoption of the plan resides in a 1973 State Board of Education action. In January 1973, under the authority granted to it by law, the Board of Education adopted a comprehensive set of regulations stating the powers and duties of school boards, superintendents, and principals. Section 6 of the Powers and Duties of School Boards reads as follows:

> School boards shall in consultation with the Superintendents and in accordance with statutes and regulations of the State Board of Education, determine the educational goals of the district, develop long-range plans and identify measurable and attainable short-term objectives. The school board shall require the appropriate review of such programs and make public the results of such investigations" (cited in SDE, 1978a, p. 1).

The State Board of Education, recognizing that local boards have direct policy control over all areas of school operations including curriculum, adopted the plan to assist local districts in their compliance with Section 6. The Joint Management Council has designed and distributed guidelines to assist local districts in developing accountability plans in accordance with State mandates. It is the intent of the guidelines that the learning skills be assessed at the intermediate (grade 4), junior high (grade 8), and high school (grade 12) levels; the Local Planning Group may choose other grades for assessment as long as they are sufficiently far apart for the results to indicate growth. The State Board of Education mandates that English language arts, mathematics, United States government and history, and New Hampshire government and history be included on the test, and granted the Local Planning Groups the option to include additional skills considered essential. The local districts may choose to:

(1) produce a planning design for themselves, a district-level plan;

(2) work cooperatively with other districts to produce a union-level plan;

(3) combine with other unions to produce a regional plan.

Regardless of the organizational path chosen, the State requires each Local Planning Group to carry out the following tasks:

(1) develop essential student outcomes for both state-mandated and locally designated fields of learning;

(2) develop performance indicators for all essential student outcomes;

(3) design and carry out sound assessment procedures;

(4) analyze the assessment data;

(5) report assessment results to the State Department of Education and to the local communities;

(6) develop a management plan based upon the assessment results.

The State requires that Local Planning Groups complete all of the above tasks by June 1981, but does not stipulate when each task must be done.

Phase of implementation. LPGs were required to submit an implementation design or preplan to the State Department of Education by January 1979. The preplan was to include:

(1) indication of district(s) covered;

(2) approval sheet for local officials' approval of the plan;

(3) membership list by professional position of Local Planning Group;

(4) statement indicating that the district intent is to implement the accountability planning process, to formulate instructional management plans consistent with assessment results, and to promote improved student performance;

(5) procedure for review and approval of amendments to the preplan;

(6) procedure for allocation of resources needed for implementation;

(7) statement that the staff has reviewed the preplan;

(8) approval criteria by the Accountability Unit;

(9) a projected timeline for the accomplishment of the six steps in the accountability planning process.

To assist each LPG with its preplan, the Council developed a Sample Accountability Plan that divided each basic step into its component parts and indicated a completion date for each component and for each of the basic steps.

Goals and Purposes

The primary purpose of the New Hampshire Accountability Plan is to improve student performance. A secondary purpose is to introduce accountability into educational planning at the local level. The Plan is based on the assumption that improved student performance requires clear definitions of the desired student results as well as a system for monitoring student progress with respect to these results. The Plan calls for yearly reporting of student progress to the community and the implementation of an instructional management plan. An instructional management plan is designed to use assessment results in continually upgrading student performance.

Competencies

A Joint House Education Committee selected the basic skill areas of English language arts and mathematics, and the State further required that United States government and history and New Hampshire government and history be tested. The Committee believed that the English language arts, comprising both oral and written communication, were essential for survival. In their guidelines the Department of Education has suggested eight competencies in the English language arts area. The Committee also believed that an understanding of mathematics was equally important to survival; the Department has suggested nine competencies in this field be tested. As a result of the 1975 State law which requires the teaching of both United States and New Hampshire government and history in all schools within the State, the Committee considered it appropriate to include these areas on the test. The Department of Education has also suggested that general knowledge of the constitution and governmental processes be considered as important as a knowledge of important names and dates. All of the suggested competencies within the mandated fields are outlined in Table 1.

Standards and Standard Setting

It was the intent of the State Board of Education that the Accountability Plan act only as a guide to local districts in developing the performance indicators and standards specific to their test instruments. The Department of Education requires each LPG to submit its policy on performance indicators and standards in accordance with the timeline developed by the LPG and approved by the Department.

Target Groups and Testing Schedule

The State Board of Education has identified all students in grades 4, 8, and 12 as target groups for testing. The plan stipulates that assessments should take place at the intermediate, junior high, and senior high school levels. If an LPG decides that the assessment schedule of the plan is not appropriate for its school system, the LPG may negotiate with the Accountability Unit for a change or modification in the schedule. The

TABLE 1

New Hampshire: Suggested Essential Student Outcomes for State-Mandated Learning Fields

English Language Arts

READING COMPREHENSION: Students are expected to be able to comprehend and interpret, literally and critically, written materials.

STUDY SKILLS: Students should be able to locate, identify and make use of specific information for a variety of purposes.

LISTENING: Students should demonstrate the ability to receive, remember, and evaluate ideas presented orally.

NON-LINGUAL COMPREHENSION: Demonstrate ability to comprehend concepts transmitted by sight symbols.

SPEAKING: Demonstrate ability to deliver and comprehend oral conversations.

COMPOSITION: Demonstrate ability to organize ideas through writing.

VOCABULARY DEVELOPMENT: Demonstrate the ability to read and understand the structure of words, and their meanings.

HANDWRITING: Demonstrate the ability to write legibly and fill out forms following directions.

Mathematics

PROBLEM SOLVING: Ability to solve problems through use of reading and mathematical skills.

APPLYING MATHEMATICS: Demonstrate ability to apply mathematics to everyday life.

TABLE 1 (continued)

Mathematics (continued)

ALERTNESS TO REASONABLE RESULTS: Demonstrate ability to understand calculations, numbers and sizes.

GEOMETRY: An understanding of geometric concepts and their function in the world.

MEASUREMENT: Ability to measure length, area, weight, size, and temperature.

CHARTS, GRAPHS: Ability to read, construct, and interpret tables and charts.

USING MATHEMATICS TO PREDICT: Ability to use probability and chance in mathematics.

CALCULATORS, COMPUTERS, AND TABLES: Ability to select and use appropriate devices in solving problems.

APPROPRIATE COMPUTATIONAL SKILLS: Ability to understand and use basic symbols, operations, whole numbers, fractions, decimals, and integers.

History and Government (United States and New Hampshire)

Students should be able to understand the nature and structure of the national and state governments. Students should demonstrate an ability to comprehend how government serves society and how governments raise and spend funds.

rationale for this selection of target groups is that the assessed grades should be far enough apart to determine if growth has occurred. If an LPG selects a grade assessment pattern other than the one proposed by the plan, it is the responsibility of the LPG to provide a rationale for its selection. The Council has established that LPGs must implement their programs completely by June 1981. The schedule for assessment after the initial assessment date will be determined by the LPG; as a part of its preplan the LPG will designate and train the assessment team and will develop procedures that will ensure consistency for several years to come.

Test Instruments

The LPG has been charged with the responsibility of choosing a test instrument. According to the Accountability Plan guidelines, the LPG may choose to:

(1) design its own test;

(2) select an existing test instrument;

(3) develop a testing instrument using preexisting items;

(4) use some combination of the preceding methods or an alternative procedure.

The State Accountability Plan provides the following guidelines for the LPGs in implementing this step:

(1) each local group should describe how its testing instrument was selected and demonstrate that the instrument chosen is valid and reliable according to the criteria outlined in the plan;

(2) the instrument should measure a student's performance against the essential student outcomes of the LPG;

(3) each locally developed instrument should be reviewed by a district team and a qualified measurement specialist chosen by the LPG in compliance with the Accountability Unit's task force of specialists;

(4) each instrument should be pretested;

(5) each instrument should provide objective information--i.e., ratings, scales, and observation schedules--which can be duplicated by others.

Test Administration

All decisions concerning the administration of the test instruments are to be made by the Local Planning Group and outlined in the preplan submitted to the Council.

Scoring and Analysis

Local Planning Groups are to develop the scoring and analysis criteria specific to the desired student outcomes in the preplan and in regard to projected improvements. According to the Department's guidelines, analysis of results by the local groups should include data which:

(1) provide a district summary of the results at each grade level and the grade performance on particular items.

(2) provide an abstract summary and analysis of student performance, and a description of the processes used to publicize the results.

Local groups are also required to submit district level results to the Department of Education.

Reporting/Dissemination

The State Department of Education requires that the results be tabulated at the district level, and that the results be publicized in local communities. Local Planning Groups may, if they desire, analyze and report their data on individual student performance levels, for the benefit of their planning needs.

The Accountability Unit requires that assessment results be forwarded to the Department upon completion. In their sample accountability plan, the Joint Management Council recommends that the LPG include the following information in its report to the State Department of Education:

(1) name of the district;

(2) dates and times of the administration of the tests;

(3) total number of students in each grade level;

(4) total number of students taking the tests;

(5) grade level tested;

(6) pass/fail percentages in a "proper perspective"; i.e., a large number of students may fail a specific competency which is of minor importance.

LPGs are also required to submit a management plan to the Accountability Unit by no later than June 1981. The guidelines suggest that parents, teachers, and administrators assist in the formulation of the plan. The plan should contain recommendations for school improvement, describe any program changes that will be made, and identify the resources necessary to make these changes.

Use and Implications of Test Results

Consequences to students. The State Board of Education has recommended that student performance on assessment instruments of the Accountability Plan be used in making instructional and planning decisions for the purpose of improving student performance. The Board of Education recommends against using the results for teacher evaluations or in determining graduation or promotion. The Department of Education suggests instead that information generated from student assessments is best utilized at the local level for planning and setting goals for student achievement.

Consequences to programs. The New Hampshire Educational Accountability Plan requires Local Planning Groups to set up a reliable system for analysis of student achievement. Once the assessment procedures are established and data collected, the Local Planning Groups are expected to examine the information from the standpoint of the question: "How can we improve student achievement?" Moreover, as a result of such investigation, the Local Planning Groups are required to prepare a management plan in accordance with Accountability Plan guidelines that is to describe how specific improvements in student achievement will be realized.

Provisions for Special Populations

The Board states that all students in the targeted groups be assessed, including handicapped students. As outlined in the plan, Local Planning Groups must indicate in the preplan any special resources they need to develop local competency testing. The State Accountability Unit's Task Force of specialists will provide technical assistance to LPGs for developing test instruments for special populations.

Program Resources and Costs

General program staffing. In New Hampshire, the State Board of Education's Accountability Unit has two directors who are responsible for:

(1) the design and implementation of the State Accountability Plan;

(2) providing technical assistance to Local Planning Groups in their efforts to comply with the State plan;

(3) approval of the preplan designs submitted by the Local Planning Groups.

In addition to the Accountability Unit, the State has the resources of the 19-member advisory Joint Management Council and two groups of consultants working with the Accountability Unit. One group consists of process specialists who work in the field, assisting Local Planning Groups with the development of their plans. The second group, subject area specialists, offers technical advice on student performance in the four competency areas.

Funding Sources

Financial support for the implementation of the Accountability Plan has come entirely from the budget of the State Department of Education. Local groups are responsible for the costs they incur in implementing the steps outlined in the Accountability Plan.

Program Evaluation

An initial evaluation of the New Hampshire Accountability Project was completed in June 1979. The Department of Education contracted with faculty from Keene State College, Keene, New Hampshire to review all published documents and unpublished materials connected with the project (e.g., project correspondence) and to interview lay figures. In the final report submitted in June 1979, the evaluator commended the groups responsible for managing and implementing the program, pointing out, for example, that the technical assistance provided by the Department has been "well-received" at the local level (Gustafson, 1979, p. 16). The evaluator also offered recommendations concerning the future role of the Joint Management Council, dissemination, measuring the impact of the Accountability Project, and funding to local districts.

The Co-Directors of the Accountability Project are also involved at present in contracting for a five-year logitudinal study to measure program impact upon student performance. This study will be carried out by an independent agency in conjunction with selected schools in the State.

Future Directions

The State Accountability Plan is a set of guidelines for local school districts. At the local level, the Local Planning Groups must use their assessment information for decisions on how to improve student performance. Local Planning Groups must also submit to the State Department of Education results of the first assessment as well as a management plan which recommends specific improvements and identifies the processes and procedures for attaining these improvements. The Department of Education encourages Local Planning Groups to involve local administrators, teachers, and parents in the task of designing their management plans.

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CONTOOCOOK VALLEY REGIONAL SCHOOL DISTRICT, PETERBOROUGH, NEW HAMPSHIRE

The testing of essential competencies in the Contoocook Valley Regional School District (ConVal), Peterborough, New Hampshire, had its origin in the concern of educators and community members for the issue of accountability. Educators and citizens held that one hallmark of an effective school system is the extent to which it ensures that students master essential competencies. The district identified seven competency areas (communication, computation, citizenship, resources and information, health, personal economics, and career education), and in 1977 the Regional Board adopted a policy requiring that students master competencies in these areas before promotion from the fourth and eighth grades and graduation from high school. The Board also mandated a staggered implementation schedule, with competencies in communication and computation the first ones to be required for promotion to the fifth grade. Beginning in 1979, all fourth-graders must master these competencies in order to be promoted; beginning in 1980 all eighth-graders must master competencies in these areas in order to be promoted; at the secondary level, the class of 1981 is the first group subject to these same requirements for graduation. Competencies in the other areas will be phased in gradually, with two areas added each year.

Teachers in the district have developed assessment instruments and a two-member team administers and scores all assessments. Results are reported at the classroom, school, and district level, but in such a way that classrooms and schools cannot be compared to one another.

The development of ConVal's program preceded the State's commitment to accountability and its mandate to local districts. Under the guidelines of this mandate, local districts are required to complete a six-step process by June 1981. Steps in this process include the establishment of student outcomes or competencies in four areas--language arts, mathematics, United States history and government, and New Hampshire history and government--and the selection or development of assessment instruments. Districts are required to use these results to review and strengthen the curriculum. The State permits districts to meet these requirements on their own or in conjunction with other districts.

The program in ConVal served as a model for the State's accountability guidelines, and hence there are many similarities between the State plan and the ConVal program. One important difference should be noted: the State recommends against using assessment results to determine promotion and graduation, whereas ConVal is committed to using the assessment results for this purpose. In accordance with the State's intent, ConVal administrators and teachers are also examining results in order to improve the curriculum.

Legislative and Policy History

Policy history. The Contoocook Valley School District's commitment to minimum competency testing stems from community interest in the concept of accountability and its application to education. School administrators and community members interested in accountability decided to review the school system by asking, in effect, what the hallmarks of a successful effective school system are. In 1975 a School Study Committee composed of educators and citizens addressed this question and determined that there were at least three final outcomes of an effective school system, which can be stated as follows:

(1) Each student demonstrates a set of essential competencies basic to functioning in our society (language, mathematics, citizenship skills, etc.).

(2) Each student acquires those specialized skills and understandings necessary to pursue individual career and life interests.

(3) Each student experiences the humanities, fine arts, practical arts, and other aspects of learning which will mature his or her ability to appreciate life (CVRSD, 1979, p. 1).

District administrators and members of the Committee considered the achievement of essential competencies to be a prerequisite to the realization of the second and third outcomes. In 1975 another group was created to assist in the development of a competency testing program. This 12-member group, the Joint Educational Council (JEC), was made up of teachers, administrators, school board representatives, students, the Superintendent, and representatives of the School Study Committee. The Council was responsible for the creation of the competency testing program. In the fall of 1975 the Superintendent submitted a proposal to the State Department of Education, requesting financial assistance and staff time from members of the Department. The Superintendent outlined a cooperative undertaking involving the district, the Department, and a group called the Center for Constructive Change. Under this proposal the district assumed responsibility for administering the program; the Department contributed funds and staff support in carrying out certain tasks, and the Center was responsible for training all staff members in the use of "results planning," a method for planning and evaluating programs. This proposal was funded and during the 1975-76 school year the Council worked with teachers and administrators to identify the competency areas and develop drafts of the competencies. The JEC determined that six competency areas were to be assessed (communication, computation, citizenship, resources and information, health, and personal economics) at three grade levels, 4, 8, and 10. In addition, secondary students were also to be assessed in career education. In the spring and summer of 1976 the competency drafts were distributed for review.

In the fall of 1976 the competencies were presented to the Board of Education, and in February 1977 the Board adopted the proposed outcomes and a policy stating that mastery of these competencies was to be linked to promotion from grades 4 and 8 and to graduation from high school; implementation of the policy was to occur on a staggered schedule.

Work on the assessment instruments began in the spring, when two members of the language arts committee were trained by Educational Testing Service in test construction and item writing. In 1977 the district formed a two-person unit (called the COMPASS team) to administer and score the assessments. Members of this unit also assisted in the development of test instruments.

The development of the ConVal program preceded the State accountability mandate. The commitment to the principle of accountability on the State level began in 1977, when the Commissioner established an Accountability Unit within the Department of Education. In March 1978 the State issued Guidelines for the Implementation of New Hampshire Accountability Plan. In effect, the State has mandated that all districts implement a six-step process which involves the establishment of student outcomes or competencies in the areas of language arts, mathematics, United States history and government, and New Hampshire history and government, and the assessment of these competencies at three levels, elementary, intermediate, and secondary. Under the State mandate, districts are required to establish an advisory group to assure community input, to report assessment results to the community and the State, and, to use the assessment results to prepare a management plan describing the steps the district will take to remedy the deficiencies in the curriculum uncovered through testing.

ConVal's program served as a basis for the State plan in a number of ways. The similarities as well as the manner in which ConVal is complying with the State mandate will be noted in subsequent sections.

Phase of implementation. Testing in communication and computation began during the 1977-78 school year. Grades 4, 5, 8, 9, 10, and 11 were assessed to establish baseline data. Mastery of competencies in specific areas is being linked to promotion and graduation on a staggered schedule. Beginning in 1979, all fourth-graders must master the competencies in communication and computation in order to be promoted to the fifth grade. By 1980, in order to enter the next grade, fourth-graders must master competencies in two additional areas: citizenship, and resources and information. In 1981, competencies in the two remaining areas, health and personal economics, will be introduced as promotion requirements. The schedule for the eighth grade is similar. Beginning in 1980, students must pass tests in communication and computation in order to enter ninth grade; tests in two more areas will be required in the following year (1981) and two in the year after that (1982). Beginning with the class of 1981, students must master competencies in communication and computation in order to graduate. Competencies in citizenship and in resources and information will be introduced as graduation requirements the following year (1982), and in 1983 the two remaining areas will be required. Finally, in 1984, the mastery of competencies in career education will be tied to graduation.

Goals and Purposes

General goals. The School Study Committee identified three characteristics of an effective school system, one of which is to ensure that students master essential competencies. The implementation of competency testing in the fourth, eighth, and tenth grades is intended to ensure that students master essential competencies before entering the intermediate and secondary grades and before graduation from high school.

Specific purposes. The specific purposes of ConVal's assessment program are as follows:

(1) to generate accurate information on what each student is and is not able to do relative to essential competencies;

(2) to make this information available to each student, his/her parents, and the staff in order to improve each student's instructional program;

(3) to have information readily accessible for district use in improving its programs;

(4) to provide reliable information regularly to the community about the effectiveness of the district's programs;

(5) to collect and use information in a manner which is constructive for both students and staff;

(6) to apply the assessment program consistently throughout the district.

In addition, the district will use the test results to determine whether students will be promoted from the primary and intermediate grades and graduated from high school.

Competencies

The seven essential competency areas chosen by the JEC for testing are a mixture of both life and academic skills. They are: communication, computation, citizenship, resources/information, career planning, personal economics, and health. The JEC delegated to school staff in each content area the responsibility for defining objectives in all areas for the primary, middle, and high school levels. Competencies in career planning are designed only for high school students. Drafts were then reviewed by the school system teaching staff and returned to the JEC for further review and revision. The competencies represent those skills that teachers and administrators believe each student must master in order to be promoted to the next grade or graduated from high school.

Competencies were submitted to the School Board for final approval in the fall of 1976. The Board approved the competencies in the spring of 1977. Competencies in ConVal are given in Table 1.

In its selection of competencies ConVal meets the State mandate that requires districts to test in at least four areas: language arts, mathematics, United States history and government, and New Hampshire history and government.

TABLE 1

Essential Competencies for the Contoocook Valley Regional School District*

Communication

PRIMARY	MIDDLE	HIGH SCHOOL
1) Reads a passage and demonstrates literal comprehension.	1) Reads a report and demonstrates literal comprehension.	
2) Identifies statements as fact or opinion.	2) Distinguishes between fact and opinion.	
3) Follows a set of simple written directions.	3) Follows written directions.	
5) Writes complete sentences.	5) Writes complete paragraphs.	5) Writes an extended paragraph.
6) Writes a thank you letter.	6) Writes a business letter.	
7) Listens to a short story and demonstrates comprehension.	7) Listens to a report and demonstrates comprehension.	7) Listens to a discussion and demonstrates comprehension.

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* Numbering system follows that in ConVal materials.

TABLE 1 (continued)

Communication (continued)

PRIMARY	MIDDLE	HIGH SCHOOL
8) Follows oral directions to complete a task of at least three steps.	8) Follows oral directions to complete a task of at least four steps.	8) Follows oral directions to complete a task of at least five steps.
9) Gives an oral presentation of a personal experience.	9) Participates in a dramatization, a discussion, gives an oral presentation and conducts an interview.	9) Gives an oral presentation to convey information.
10) Uses the telephone in a simulated emergency situation.	10) Uses the telephone in a simulated emergency situation.	

Computation

1) A. Reads orally numbers from zero to one million.	1) A. Reads orally numbers from one thousandth to one billion.	
B. Writes numbers from zero to one million.	B. Writes numbers from one thousandth to one billion.	

TABLE 1 (continued)

Computation (continued)

PRIMARY	MIDDLE	HIGH SCHOOL
2) A. Is proficient in doing one-digit addition facts. B. Is proficient in doing one-digit subtraction facts	2) Is proficient in doing one-digit addition, subtraction, multiplication and division facts.	
3) Writes the products of multiplication facts from zero through nine.		
4) Adds multi-digit numbers.		
5) Subtracts multi-digit numbers.		
6) Multiplies with one-digit multipliers. (Carrying)	6) Multiplies with multi-digit multipliers. (Carrying)	
7) Writes the quotients of division facts from zero through nine.	7) Divides with multi-digit divisors. (Remainders)	

TABLE 1 (continued)

Computation (continued)

PRIMARY	MIDDLE	HIGH SCHOOL
	8) Adds, subtracts, multiplies, and divides fractions.	
	9) Adds, subtracts, multiplies and divides decimals.	
		10) Uses percent and percentage to compute a finance charge.
	11) A. Converts fractions and decimals. B. Rank orders fractions and decimals.	11) Rank orders fractions, decimals and percents. (Using conversions)
12) Reads a clock.	12) Computes elapsed time.	
13) Identifies liquid measures. (English)		
14) Measures. (English)	14) Measures. (English)	

TABLE 1 (continued)

Computation (continued)

PRIMARY	MIDDLE	HIGH SCHOOL
15) A. Orders the days of the week.		
B. Orders the months of the year.		
16) Reads a thermometer.		
	17) Computes the perimeter of quadrilaterals.	
	18) Computes the area of rectangles.	
	19) Converts units of measure into larger or smaller units. (English)	
	21) Converts units of time into larger and smaller units. (English)	

TABLE 1 (continued)

Computation (continued)

PRIMARY	MIDDLE	HIGH SCHOOL
22) Reads a picture-graph.	22) A. Reads bar and line graphs.	22) A. Reads circle graphs.
	B. Reads distance table.	B. Reads a travel schedule.

Resources/Information

PRIMARY	MIDDLE	HIGH SCHOOL
1) Uses the dictionary.	1) Finds specific information in given resources.	
2) Uses a telephone book.	2) Writes an outline.	

Career Planning (High School)

Writes a career plan that includes career objectives and the methods for at least the next step after high school.

TABLE 1 (continued)

Personal Economics

PRIMARY	MIDDLE	HIGH SCHOOL
	1) Selects best buy from series of unit prices.	1) Computes unit cost.
		2) Decides where his money buys more given two advertisements and a grocery list.
3) Selects coins for purchases and computes change, given cost of an item.	3) Computes length of time it takes to reach a goal given a set of expenditures and an income.	3) Makes monthly budget for family of four, given monthly income and expenditures.
		4) Selects price that fits a budget, given an income and expenses.
5) Identifies two services of a bank.	5) A. Fills out a deposit slip.	5) A. Identifies bank services.
	B. Fills out a withdrawal slip.	B. Fills out a check.
		C. Balances a month's sample checkbook.

TABLE 1 (continued)

Personal Economics (continued)

PRIMARY	MIDDLE	HIGH SCHOOL
		6) A. Fills out short tax form. B. Identifies types of insurance and their uses.
	7) Identifies community services supported by taxes.	7) Explains reasons for the difference between the gross and the take-home pay.
8) Completes a personal data form.	8) Completes a school registration form.	8) Fills out a job application.
	9) Reads consumer packaging and demonstrates comprehension.	

Citizenship

PRIMARY	MIDDLE	HIGH SCHOOL
1) Reads a school rule and states why it is needed.	1) Reads a community law and states why it is needed.	1) Reads a state or national law and states why it is needed.

TABLE 1 (continued)

Citizenship (continued)

PRIMARY	MIDDLE	HIGH SCHOOL
2) Identifies responsibilities of policeman, fireman, principal.	2) States one responsibility of selectman, town clerk, state representative, governor and his executive council.	2) A. Identifies the three levels of government and powers of each. B. States functions of the three branches of federal government.
	4) Identifies four of the individual rights guaranteed by the Constitution.	4) A. Reads passages and describes individual rights expressed or their abuses. B. Identifies agencies for redress of grievances.
5) Votes for class representative by written ballot.	5) Marks a ballot.	5) States: age to register, where to register, how to register, and where to go for information on these subjects.

TABLE 1 (continued)

Citizenship (continued)

PRIMARY	MIDDLE	HIGH SCHOOL
6) A. Identifies the four points of a compass. B. Demonstrates right and left.	6) Locates specific directions on a map using eight compass points.	
7) Locates symbols on a map and tells what they represent.	7) A. Uses map legend and scale.	7) Reads a road map.

Health

PRIMARY	MIDDLE	HIGH SCHOOL
1) Cares for own minor medical needs.	1) Knows symptoms and prevention of common communicable diseases.	
2) Recognizes potential hazards and preventive measures.	2) Recognizes an emergency and knows the basic action to take.	2) A. Demonstrates basic first aid. B. Demonstrates personal protection procedures.

TABLE 1 (continued)

Health (continued)

PRIMARY	MIDDLE	HIGH SCHOOL
3) Demonstrates knowledge of body systems and maintenance.	3) A. Demonstrates knowledge of body systems and maintenance. B. Knows the effects of drugs, alcohol, smoking and stress on body systems.	
4) Demonstrates body control and motor skills.	4) Demonstrates body control and motor skills.	4) A. Maintains a basic fitness level. B. Develops a personal exercise program and can explain the benefits.
5) Identifies the four basic food groups.	5) A. Identifies foods which supply major nutrients. B. Tells how processing and additives change food.	

TABLE 1 (continued)

Health (continued)

PRIMARY	MIDDLE	HIGH SCHOOL
	9) States the legal implications of the purchase and possession of drugs and alcohol.	
10) Classifies products as animal, vegetable or mineral.	10) Identifies the responsibilities of a consumer of natural resources.	

Standards and Standard Setting

Standards for the ConVal essential competencies in all eight areas were set by the COMPASS team in conjunction with district teachers with content area expertise. The passing standards for each competency in communication and computation were set by testing contrasting groups. The ConVal teachers designated groups of masters and nonmasters to be tested to determine a cutoff score. The fourth-grade score was determined by testing second- and sixth-graders, the eighth-grade score by testing fourth- and twelfth-graders, and the twelfth-grade score by testing sixth-graders and adults.

For the fourth grade, a standard is set for each competency in communication, with standards ranging from 75% to 83%. The standard for the majority of competencies in mathematics is 80%. The same standard is applied to the competencies in computation for the eighth and tenth grades. The communication competencies at the middle and high school levels have mastery standards ranging from 75% to 83%.

The State mandate allows each local district to determine what type of scoring criteria to use and the standards for each grade tested.

Target Groups and Testing Schedules

The target groups in the ConVal essential competency testing program are students in grades 4, 8, and 10. The rationale for testing at these grade levels is that the competencies tested are defined as exit criteria. Grade 4 is the last year of primary school; grade 8 is the last year of middle school; and grade 10 represents a point before high school graduation at which remediation can still be applied if necessary.

The district is planning to phase in the testing of competencies and the introduction of promotion and graduation requirements over the next five years. While assessment of all competencies begins once the tests are developed, the linking of the tests to promotion and graduation will go into effect gradually. For example, baseline testing of grades 4, 5, 8, 9, 10, and 12 in communication and mathematics was conducted during the 1977-78 school year. Beginning in June 1979, all fourth-graders must pass the tests in these two areas to graduate. In the following year, all fourth-graders must master the competencies in citizenship and resources and information as well, and by 1981, in health and personal economics. The eighth-grade schedule is similarly staggered, with communication and computation the first two areas to be linked to promotion. Two additional areas will be added each year, until all the remaining competencies have been introduced.

Secondary students will first be required to pass the tests in communication and computation in 1981, and in citizenship and resources and information in 1982. Competencies in health and personal economics will first be required for graduation in 1983, and career planning will be introduced as a requirement in 1984.

Testing on all competencies during the school year is scheduled by the two members of the COMPASS team. In the 1978-79 school year, fourth-graders were tested in communication and computation in January, April, and May; eighth-graders in March and May; and tenth-graders in February and May.

Both the target groups and testing schedule chosen by ConVal are in compliance with the State mandate, which requires that districts test at least once in the elementary, intermediate, and secondary grades.

Test Instruments

In June 1976 the Joint Educational Council specified seven areas in which competencies were to be identified. Five staff groups composed of teachers were organized to develop the competencies. The language arts group was the first to complete its work--i.e., the writing of the communication competencies for the primary, intermediate, and secondary levels. In the spring of 1977 two members of this group were trained by Educational Testing Service in item writing and test construction. Field tests of the items measuring the communication competencies were conducted in spring 1977. These two item writers also worked with the mathematics committee to develop and field-test items during the summer and fall of 1977. The fourth-, eighth-, and tenth-grade tests in language arts and mathematics were first given to grades 4, 5, 8, 9, 10, 11, and 12 in fall 1977 in order to gather baseline data.

There is a test to measure each competency. The committees prepared at least two forms for each test. The number of items measuring each objective or competency varies, as does the number of objectives identified in each area. Some tests are multiple-choice; others are performance-based. For example, at the primary level, a student is asked to use a telephone in a simulated emergency situation, i.e., to report the emergency to the test administrators using a toy telephone.

All revisions in tests must be approved by the content area group responsible for the development of the test. Final approval is the prerogative of the Joint Educational Council.

Under the State mandate, districts are required to develop or select assessment instruments, and, hence, ConVal is in compliance with the mandate.

Test Administration

Competency testing at all levels and test security are the responsiblity of the district's two-member competency assessment team known as the COMPASS team. All tests are untimed. The COMPASS team estimates that fourth-graders require about five hours to complete all 22 tests (one test per competency) in communication and computation. The testing sessions typically last only an hour to avoid tiring the students. The COMPASS team returns to a school as often as necessary to complete testing and to administer makeup tests. They also handle all irregularities that arise. Under the State mandate, all responsibility for test administra- tion is given to local districts.

Scoring and Analysis

The COMPASS team also scores all assessments. Test results are then compiled mechanically in the district and several report forms generated. Results are analyzed by individual student, by school, and for the district as a whole. The COMPASS team also distributes the reports. Responsibility for scoring assessments is left to local districts under the State mandate.

Reporting/ Dissemination

The COMPASS team prepares and distributes reports to each school, the School Board, the district, parents, and the general community. Teachers receive printouts of the test results for each student. Individual student reports indicate the grade level assessed, the competency area tested, the specific competencies tested, the form used, and whether the student passed. School administrators receive printouts of the results

Provisions for Special Populations

Handicapped students form the only special population identified in the ConVal School Board competency testing policy. These students are expected to meet all of the essential competencies at the appropriate grade level. However, since a special team must develop an education plan for each handicapped student, that team may recommend that one or more competency requirements be waived if, in their judgment, a student cannot reasonably be expected to meet them. In some cases, at grade levels 4 and 8, competency test requirements may be delayed for a grade or two instead of being waived. A waiver of competency requirements for graduation is subject to review by the Superintendent, the principal, and a School Board member. If a waiver is granted, the competencies not mastered will be noted on the student's permanent record. Transfer students must meet competency requirements as outlined in School Board policy.

The State policy requires that all students in the target groups be assessed, including special populations. However, the Special Task Force of the State Accountability Unit will provide technical assistance to local groups for developing test instruments for special populations.

Program Resources and Costs

General program staffing. The Contoocook Valley Superintendent of Schools is responsible for the implementation of the competency testing program developed by the JEC. The actual operation of the program is the responsibility of the full-time, two-member Competency Assessment team. The COMPASS team develops, administers, and corrects the tests, and then reports test results. Remediation is the responsibility of the existing teaching staff.

Approximate costs and funding sources. Both State and local funds were used for program development. The State provided both staff time and approximately $15,000 between 1976 and 1977. The district also released staff in order to develop the competencies and hired two full-time assessment administrators (i.e., the COMPASS team). There are no estimates of the amount spent by the district in developing the program.

Program Evaluation

No formal evaluation of the program has been conducted to date, nor is one planned for the future.

Under the State mandate, districts must use assessment results in reviewing the curriculum and developing a management plan to strengthen weaknesses. ConVal teachers have been using test results for this purpose, according to district administrators. The district must submit a complete management plan to the State by June 1981.

Future Directions

District administrators will use the planning model developed by the Center for Constructive Change in considering ways to assess the other two criteria identified by the School Study Committee as hallmarks of a successful school system. Therefore, in the future, the district will attempt to determine whether students are developing the skills necessary for making the transition from high school to work or to post-secondary education, and whether they are developing skills and talents useful in extracurricular activities.

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NEW JERSEY

In September 1976, the New Jersey State legislature passed A-1736, which calls for the Commissioner of Education and State Board of Education to establish statewide minimum educational standards in "basic communication and computational skills." The purpose of New Jersey's Minimum Basic Skills program, as it is known, is to provide sufficient data for educational decision makers to assist in developing programs to ensure that students will achieve at least minimum competence in reading and mathematics to prepare them to function in society. While standards are not currently tied to graduation, the legislation does require local districts to engage in program planning and to provide remediation to failing students.

A-1736 called for immediate implementation of the testing program, so that already existing State assessment tests which were administered in grades 4, 7, and 10 in the 1976-77 school year were used as minimim competency tests. Since then, the Board has directed that Minimum Basic Skills tests in reading and mathematics be administered every spring to students in grades 3, 6, 9, and 11. The Department of Education is responsible for the development, scoring, and analysis of the tests each year. Local districts are responsible for administering the tests, analysis of the data, and for developing remedial programs and diagnostic services which are consistent with the goals of the program.

Legislative and Policy History

Policy history. In early 1976, the New Jersey State Board and Commissioner of Education appointed a task force to look into the appropriateness of setting minimum competency standards in the State of New Jersey. The impetus for this feasibility study came from two sources: an expression of concern by parent groups over lack of student achievement in the basic skills, and the Board's observation that other states were turning to minimum competency testing.

Before the task force could report the outcomes of the study, the New Jersey legislature, in September 1976, passed A-1736. This bill, actually an amendment to a 1975 General Education Act, called for the systematic establishment by the State Board of Education of minimum proficiency standards for the New Jersey educational system. A-1736 delegated to the State the authority to set "goals and objectives consistent with the legislative guidelines and to define standards of performance, including uniform statewide standards of pupil proficiency in basic communication and computational skills necessary to indicate achievement of the goals and objectives." This legislative mandate to "define standards of performance" was, in effect, a directive to the New Jersey educational authorities to institute minimum competency testing. The specific competencies and grade levels to be tested were to be determined by the Board, and the testing program was to begin immediately in the 1976-77 school year. In addition to testing, the bill required local districts to develop and implement remediation programs for any student who failed to meet the statewide standards of minimum competency.

Passage of A-1736 did not constitute the first testing-related action undertaken by State authorities. New Jersey statewide assessment tests had been given in grades 4, 7, and 10 every year and in grade 12 every three years since 1972.

Phase of implementation. Because A-1736 called for the immediate implementation of the testing program, the tests administered in the 1976-77 school year were those previously developed for the statewide assessment program, known as the Educational Assessment Program (EAP). Simultaneously, however, the Department of Education directed the development of competency tests for use in future years. The Minimum Basic Skills (MBS) tests developed specifically in response to A-1736 were first administered in the spring of 1978 and are redeveloped every year for a spring administration.

Goals and Purposes

The overall goal of the New Jersey minimum competency testing program is to provide sufficient data for educational decision makers to assist in developing programs to ensure that students will achieve at least minimum competence in "communication and computation skills." The specific purpose of the program is to better prepare students in minimum reading and mathematic competencies by encouraging schools to make any necessary curriculum changes, strengthen diagnostic and remediation programs, and improve in-service training efforts. There are no graduation or promotion requirements tied to the minimum competency testing. However, a bill tying the test to graduation has passed both houses of the legislature and is awaiting the Governor's signature.

Competencies

The legislative mandate calls for "uniform standards of pupil proficiency in basic communication and computational skills" which will prepare students to "function politically, economically and socially in a democratic society." The State Board of Education and the Commissioner of Education interpreted this directive as a call for testing specifically in mathematics and reading.

In order to develop the specific performance objectives in reading and mathematics at the grade levels to be tested, the State Board of Education and the Commissioner of Education, in cooperation with the teachers' union and other groups, appointed nine committees: (1) Elementary Reading Test Development Committee; (2) Elementary Mathematics Test Development Committee; (3) Secondary Reading Test Development Committee; (4) Secondary Mathematics Test Development Committee; (5) Technical Advisory Committee; (6) Minorities Council; (7) Committee on Communication and Life Skills (to include writing, listening, and speaking); (8) Bilingual Council; and (9) an overall Advisory Committee (composed of the chairpersons of the other eight committees).

The test development committees (elementary for grades 3 and 6; secondary for grades 9 and 11) are composed of teachers and content area specialists. Approximately a dozen people comprise each of the four committees. Their first task was to define minimum reading and mathematics objectives for New Jersey. They began by reviewing and refining the lists of objectives developed for the former statewide educational assessment tests. Following this initial committee work, a survey form was sent to all New Jersey teachers of grades 3 and 6, to every high school teacher, to a sample of curriculum specialists, to all superintendents, to a sample of high school seniors, and to all local boards of education. A public survey was also developed and administered to approximately 1,000 people by a public survey agency. Altogether, the views of approximately 33,000 people about the objectives to be assessed by the tests were gathered and recorded.

Using the results of these studies, the committees developed three clusters of objectives in reading and four clusters of objectives in mathematics. In reading, the three clusters were (1) word recognition, (2) comprehension, and (3) study skills. In mathematics, the four clusters were (1) computation, (2) number concepts, (3) measurement and geometry, and (4) problem solving and application. Skill definitions of each of these clusters are presented in Table 1.

TABLE 1

Minimum Basic Skills in Reading and Mathematics for New Jersey Students in Grades 3, 6, 9, and 11

Reading

I. Word Recognition

Grade 3:
- A. Sight vocabulary (1)*
- B. Phonics (5)
- C. Structural analysis (2)
- D. Contextual analysis (1)

Grade 6:
- A. Phonetic analysis (1)
- B. Structural analysis (3)
- C. Contextual analysis (5)

Grade 9:
- A. Structural analysis (3)
- B. Word meaning (5)

Grade 11:
- A. Word meaning (4)

II. Comprehension

Grade 3:
- A. Literal (6)
- B. Interpretive (3)

Grade 6:
- A. Literal (4)
- B. Interpretive (3)

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* The numbers in parentheses refer to the number of skill definitions listed under each skill.

TABLE 1 (continued)

Reading (continued)

Grade 9:
- A. Literal (4)
- B. Interpretive (4)
- C. Evaluative (4)

Grade 11:
- A. Literal (4)
- B. Interpretive (4)
- C. Evaluative (4)

III. Study Skills

Grade 3:
- A. Alphabetical sequence
- B. Table of contents

Grade 6:
- A. Alphabetical sequence
- B. Table of contents
- C. Glossary
- D. Index
- E. Dictionary skills--guide words
- F. Dictionary skills--selection of appropriate meaning
- G. Obtaining facts from illustrative materials--maps, graphs, tables

Grade 9:
- A. Locational skills (4)
- B. Understanding illustrative materials (3)

Grade 11:
- A. Identify appropriate reference sources
- B. Use appropriate reference materials
- C. Use road maps, charts, illustrations

TABLE 1 (continued)

Reading (continued)

Type of Reading Materials

Grades 3 and 6: No listings

Grades 9 and 11:
- A. Citizenship materials
- B. Continued learning material
- C. Employee/employer material
- D. Health and safety material
- E. Consumer information

Mathematics

I. Computation

Grade 3:
- A. Whole numbers (12)

Grade 6:
- A. Whole numbers (11)
- B. Fractions (5)
- C. Decimals (7)

Grade 9:
- A. Addition of whole numbers (4)
- B. Subtraction of whole numbers (5)
- C. Multiplication of whole numbers (3)
- D. Division of whole numbers (4)
- E. Addition and subtraction of fractions (6)
- F. Multiplication and division of fractions (5)
- G. Addition and subtraction of decimals (4)
- H. Multiplication of decimals (3)
- I. Division of decimals (4)
- J. Percent (3)

Grade 11: Same as Grade 9

TABLE 1 (continued)

Mathematics (continued)

II. Number Concepts

Grade 3:
- A. Count to 1,000; read or write numerals up to 1,000 (base 10 only)
- B. Recognize place value in three-digit numerals
- C. Recognize models for simple fractions
- D. Solve simple equations involving addition
- E. Solve simple equations involving subtraction
- F. Solve simple equations involving multiplication
- G. Solve simple inequalities
- H. Give the cardinal numbers of a set
- I. Recognize odd and even numbers less than 20
- J. Relate inverse operations: addition to subtraction and multiplication to division
- K. Solve equations involving concept of identity
- L. Count by 2's, 5's, or 10's; identify a missing term in a simple number pattern or sequence

Grade 6:
- A. Numeration (7)
- B. Fraction concepts (5)
- C. Number sequences (2)
- D. Properties (6)

Grade 9:
- A. Comparison of fractions (3)
- B. Changing fractions, decimals, and percent to equivalent forms (5)
- C. Rounding numbers (3)
- D. Properties of numbers (3)

Grade 11: Same as Grade 9

III. Measurement and Geometry

1) Grade 3:
- A. Select the proper unit of measure for length from a set of unit measures: inch, foot, yard
- B. Identify metric units: meter, liter, gram

TABLE 1 (continued)

Mathematics (continued)

C. Determine the time of day by the half-hour when given a picture of a clock
D. Tell how many minutes in an hour
E. Tell how many days in a week
F. Tell how many months in a year
G. Identify a day and date on a calendar
H. Determine the value in cents of a set of coins
I. Recognize basic geometric figures: triangle, rectangle, square, circle
J. Locate points on a number line for whole numbers

Measurement and Plane Figures

2) Grade 6:
A. Measuring length of object to nearest whole unit
B. Determine most appropriate measure to be used to measure length
C. Recognize an appropriate unit of measure for weight or given a particular object, select the most appropriate unit of weight measure (metric or traditional)
D. Recognizing the appropriate unit of measure for capacity
E. Temperature measure: reading a thermostat
F. Converting within the same measuring system (metric or traditional)
G. Perimeter of triangles and rectangles
H. Identify or name geometric figures: circle, triangle, square, and rectangle

Measurement

3) Grades 9 and 11:
A. Customary measure (5)
B. Metric measure (5)
C. Area measure (4)
D. Other measure (3)

TABLE 1 (continued)

Mathematics (continued)

Simple Geometry

4) Grades 9 and 11:
   - A. Geometric concepts (4)
   - B. Recognition of parts of a circle (4)

IV. Problem Solving and Applications

1) Grade 3:
   - A. Translate mathematical sentences to words (simple one-step)
   - B. Determine whether a set of coins is sufficient to purchase an item at a given cost
   - C. Make change in simple store purchase problems involving sales less than 50 cents
   - D. Solve problems related to the passage of time
   - E. Solve problems involving distance (pictorial)
   - F. Solve simple reading problems related to computation objectives

2) Grade 6:
   - A. Problems with reading adapted and relevant to appropriate grade level (single operation and multi-operation)
   - B. Ratio and proportion: including practical applications
   - C. Practical estimation (no reference to rounding)
   - D. Average: Given five or fewer numbers, what is the average
   - E. Given the price of various items, determine the change after purchase of selected items
   - F. Interpret simple scale drawings and maps
   - G. Read data from simple graphs and charts
   - H. Interpret data from simple graphs and charts
   - I. Computation involving expressed amounts of money

TABLE 1 (continued)

Mathematics (continued)

Problem Solving

1) Grade 9:
- A. Reading and interpreting data from charts, tables, graphs, and maps (9)
- B. Consumer problems (3)
- D. Applications involving basic operations (4)
- E. Estimation and approximation

2) Grade 11:
- A. Reading data from charts, tables, graphs, and maps (5)
- B. Interpreting data from charts, tables, graphs, and maps (4)
- C. Consumer problems (6)
- D. Applications involving basic operations (4)
- E. Estimation and approximation (3)

Standards and Standard Setting

Under a directive of the State Board, the committees had the responsibility for setting standards. The standards were recommended to the State Board of Education and the Commissioner of Education and eventually adopted.

In the first year of program development, after the field test of the original test, both Reading Committees and the Elementary Mathematics Committee used the Nedelsky approach for standard setting; the Secondary Mathematics Committee used a modified Angoff approach instead. Results of these approaches yielded a 65% pass for the mathematics test and a 75% pass for the reading test. These standards are applied on an overall and not a section-by-section basis.

Because New Jersey develops new basic skills tests every year, test scores must be equated with each other from one year to the next. It is extremely unlikely, however, that two different tests of the same subject will be of the same level of difficulty. Thus, in the first year of testing, the Department set the passing standard for mathematics at 65%, but in the second year of testing, the standard for the same area was 68%. The difference between the two percentage standards reflected the difference in difficulty between the test developed for the first year and that developed for the second, not an arbitrary change in the standard. The achievement level designated by the standard remains the same from year to year; depending on the difficulty of the particular year's test, the percent correct representing the standard may vary. In view of the fact that such apparent yearly fluctuations in passing standards might confuse the public, the Department developed a 0-100 score scale to equate yearly percentage standards. Consequently, from year to year the passing standard for a given skill area is an unchanging scaled score into which differing yearly percentage standards for that area can be translated.

The Department has set scaled scores of 65 as passing in mathematics and 75 as passing in reading.

Target Groups and Testing Schedule

The legislative bill does not mandate which grades should be tested in the basic skills program. The bill only specifies that testing must occur at an appropriate point in the educational careers of the pupils, and that the standards of proficiency must be reasonably related to the levels of competence needed to function politically, economically, and socially in a democratic society.

Therefore, in the 1976-77 school year the State Board of Education determined that testing should occur in grades 4, 7, and 10 in the fall of that year. Students were tested in reading and mathematics; the instruments used were the assessment tests which had been utilized in New Jersey since 1972. The passing score was arbitrarily set at 65%. The State Board of Education made it very clear that the tests used in 1976-77 were not minimum competency exams, but were only proxies for the minimum competency testing which was to be developed. This was the first year that a total score was reported.

Then, in 1977-78, students were tested for the first time using the Minimum Basic Skills Tests developed in 1977. These tests were field-tested with a sample of students in September-October of 1977; the actual minimum competency tests were administered in the spring of 1978 to all children in the selected grades. A total of 400,000 students took the minimum competency tests.

When the change was made from the existing assessment tests to the Minimum Basic Skills test, the Board of Education changed the testing groups from grades 4, 7, 10, and 12 to grades 3, 6, 9, and 11. The Board of Education also moved the testing date from fall to spring to reduce the time lag between test administration and enrolling students in a remedial program. Originally, a student who was tested in the fall and failed to meet minimum standards would not enroll in a remedial program until the following fall; only the lowest-ranked students, those in the lowest 20% of their class, received remediation in the semester immediately after test administration. The spring administration date meant, then, that students who failed to meet the minimum standards could receive remediation in the ensuing semester, the fall of the next academic year.

In summary, in 1976-77, during the first year of the program, fourth-, seventh-, and tenth-grade students were examined using existing New Jersey assessment instruments. In 1977-78, students were given the minimum competency tests. This test administration took place in the spring rather than in the fall, and the grades tested were 3, 6, 9, and 11 rather than 4, 7, and 10. The revised scheduling and target groups for the 1977-78 test administration will be the same in the future. All students in grades 3, 6, 9, and 11 will continue to be tested each year.

Test Instruments

Educational Testing Service (ETS) was awarded the contract to develop the Minimum Basic Skills (MBS) test in the first and second years of the program. National Evaluation Systems (NES) received the contract to develop the MBS test for the third year.

For the test administered in the 1977-78 school year, items were developed based upon the objectives specified by the test development committees. The test items and task specifications were distributed to schools throughout the state in September 1977 for review by teachers and administrators. Following this review, both the Minorities Committee and the State Board of Education reviewed all of the items and suggested minor revisions.

Department of Education staff conducted a field test of the items in September-October 1977, using a stratified sample of approximately 400 children per subject area subtest per grade level. As part of their data analysis, Department staff utilized the Angoff procedure for analyzing the results of the field test for possible test item bias. Following data analysis, the Technical Advisory Committee set up guidelines for examining the data and interpreting the results. Only minor changes to the items were made on the basis of the Committee's review of the field test results to ready the items for the Spring 1978 testing.

For the second year of testing, ETS replaced items on a one-to-one basis to ensure that the standard would remain the same from one test to the next. For equating purposes, 25 of the original items from the first year test, called anchor items, were included on the field test for the second year.

In 1978, the first year of testing, there was concern that the third-grade students, who had never been tested in the State program, would have trouble with the answer sheets. Therefore, the Department tried several different kinds of answer sheets in that field-testing and decided to adopt a larger-than-usual "bubble," or circle, format. An optional practice test may also be given to third-grade students to accustom them to the testing situation.

Test Administation

The Minimum Basic Skills tests in New Jersey are administered by the local school districts. Each subject area subtest takes approximately one and one-half hours to complete, and in the 1977-78 school year, all subtests at all grade levels were administered within a two-day testing period. In the 1978-79 school year, local districts were permitted a three-day testing period for the third grade, but a two-day period for the other grades. In the coming year, 1979-80, a four-day testing period will be allowed in order to give the schools more flexibility, and to avoid the scheduling difficulties which occurred with only a twoor three-day test period. Local districts may adopt different test schedules for each grade level, provided the schedules conform to certain requirements. For grades 6, 9, and 11, the tests may be given in two sittings (reading in one, math in the other) on any two consecutive days within the four-day period. For grade 3, the test may be given in three sittings on three consecutive days within the four-day period.

Any irregularities in test administration are handled by the local districts. There is a place on each answer sheet for a teacher to indicate a decision to invalidate a student's score. A teacher may invalidate the test results because of a student's sickness during the exam, for cheating, or for other irregularities in the testing administration.

In the first year of testing, a one-week period was allowed for the administration of makeup tests. The makeup period was increased to two weeks in the second year of testing, and will remain at two weeks. If a student takes the makeup within the two-week period, the State Department of Education will score the test. If a student does not take the test within the two-week makeup period, then the district will be responsible for scoring the makeup. However, districts must administer the test to absentee students up to the very last week of school.

Scoring and Analysis; Reporting/Dissemination

The Department of Education scores the MBS tests and reports the results to local districts approximately four weeks after the spring testing. The Department produces both individual student reports and a variety of summary reports. The individual reports include a total test score for the student and an item-by-item analysis of performance; these reports are sent to the student, the student's parents, and the student's school for placement in the student's permanent file.

The summary reports include: (1) a roster of students by school and district who have scored above the statewide standards; (2) cluster score indices for all students, grouped by school and district; (3) a listing of those students who scored below statewide standards, grouped into priority categories based on how far below the standards the scores are; and (4) item-by-item objective-referenced summary results are also reported for each class, school and district as well as for socioeconomic status group, type of community, county, and the State as a whole.

After the State has forwarded results to the local districts, the districts have a 30-day period for validating the information and making decisions as to their method of complying with the requirement to make the results public. All information is public except for an individual's data. At the end of this 30-day period, the State is required to release summary reports of district-wide results. These results are generally reported in July of each year. In the fall, item-by-item summary results must be released by the State and each of the districts.

Use and Implications of Test Results

Consequences to students. Students who fail the minimum competency tests must receive remediation. The local school districts are responsible for developing remedial programs for students who fail; however, the Board of Education has emphasized that other factors besides test scores must be taken into consideration in deciding whether or not to remediate a student. Therefore, there may be students who have failed the minimum competency test and are in need of remediation, students who have passed the minimum competency test who are also in need of remediation, and students who have failed the minimum competency test but are not in need of remediation. The State requires the local districts to specify in their annual reports to the State Board of Education how many students in the district are in each of those three classifications, how many students are under remediation and in what kinds of programs. There are no special consequences for students who pass the minimum competency test.

Consequences to programs. Each year the local school districts are required to submit their program plans to the State Department of Education, as mandated by law. The Public School Act of 1975 (Chapter 212, Public Laws of 1975) states that each local district must develop, as part of its annual educational plan, a basic skills improvement plan to be approved by the Commissioner. The plan may include proposals for:

(1) curriculum changes; (2) in-service teacher training programs; (3) programs for student diagnosis, remediation, or skill maintenance; (4) handling possible communications with parents or guardians; and (5) other measures for promoting student progress. The law goes on to state that the annual report must include: (1) demographic data for each school; (2) the results of assessment programs, the results of statewide and district testing conducted at each school, and the results of district evaluations of pupil proficiency in the basic communication and computational skills; (3) information about each school's fiscal operations, which is to include the budget for each school; (4) an assessment of a school's effectiveness in achieving State, district, and school goals and objectives applicable to the pupils, that includes an assessment of the effectiveness of any basic skills improvement plan; (5) plans and programs designed for professional improvement; (6) plans for innovative or experimental educational programs aimed at improving the quality of education; (7) recommendations for school improvement during the following school year. The annual report must also specify the number of children who will be in remedial programs and the programs in which they will participate.

When local districts choose to use their own locally developed tests for assessing proficiency in skills which are not mandated by the State or to test grades other than those mandated, these tests must meet statewide guidelines. These guidelines are now being developed by the Department of Education.

Provisions for Special Populations

Students who are classified as handicapped or as limited English-speaking students are allowed, but are not required, to participate in the minimum basic skills programs. If these students are tested, their results are not included in the report of the overall test results. The teacher can indicate on the answer sheet whether the student taking the test is a handicapped or limited English-speaking student; then that student's sheet will go through the analysis procedures, but the results are not aggregated with those of the other students.

The State Department is in the process of changing the general administrative code to state that the student's Individual Educational Plan must specify whether or not that student can be tested. Also, the State is in the process of developing alternate test forms for blind, visually impaired and hearing impaired students. These forms are expected to be completed and field tested in the fall of 1979.

Future Directions

Two new bills are currently under consideration in the State legislature. The first will require all students to pass the minimum competency test in order to receive a high school diploma. If passed, this bill could eliminate the present eleventh-grade tests, and require or recommend that the Department of Education test for proficiency in reading, writing, and arithmetic in the ninth grade, with retesting to take place each year until students have passed the examination. In anticipation of the passage of this bill, the Department is currently developing a writing assessment test. The second bill before the legislature would tie grade promotion to passing the statewide tests. It is unclear whether or not the latter bill will pass.

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NEW MEXICO

For some time prior to 1976, there had been concern in New Mexico over the amount of time that students spent in school and the resulting levels of competency which they acquired in the basic skills of reading, writing, arithmetic, and problem solving. Consequently, the State Superintendent's Basic Skills Task Force, appointed in September of 1976, formulated the Basic Skills Plan for New Mexico to include evaluation of existing basic skills programs, testing for competency in basic skills, and remediation for students who demonstrate a lack of competency in basic skills. Under this plan, the State Department of Education provides local districts with the New Mexico High School Proficiency Examination, which consists of a custom-developed version of the Adult Performance Level (APL) test and a Writing Skills appraisal; curriculum planning guidance; and technical assistance in planning for the teaching of basic skills. The local districts assess the basic skills curriculum, test students at various checkpoints, and provide for remediation.

The New Mexico High School Proficiency Examination is used to test levels of competency of all students. Students who pass the examination receive a diploma endorsement signifying satisfactory completion of the minimum competencies examination upon graduation; students who fail the tests must be offered a chance to participate in a remedial program and to take the tests again. The State has set a statewide minimum standard of 65% correct on the APL portion of the examination, while the local districts set the minimum standards on the Writing Appraisal portion. The first class to be affected by the diploma endorsement is the class of 1981, tested as sophomores in February of 1979.

Legislative and Policy History

Information received from various sources during the early and mid-1970s suggested to New Mexico's State Board of Education that there had been a general decline in student competency in basic skills--reading, writing, arithmetic, and problem solving. At a "People's Forum on Education" held during the spring of 1976, the New Mexico Legislative School Study Committee, university faculty members, and the general public all expressed concern that the schools were spending insuffiecent time on the basic skills. Further, results of surveys by the League of Women Voters and the P.T.A., results from achievement tests, and results of local needs assessments all confirmed the need for evaluation and improvement of the basic skills curriculum in New Mexico.

In April 1976, the State Board adopted the State Department of Education's "A Proposal to the State Board for the Development of a State Plan for the Improvement of the Teaching of the Basic Learning Skills," an action which led the State Superintendent to appoint the Basic Skills Task Force in September 1976. This Task Force comprised a superintendent, a teacher, a principal, a university faculty member, a school board member, a legislator, representatives of teacher and parent organizations, and several staff members of the State Department of Education.

The Task Force (1) identified a group of basic life competencies within the subject areas of reading, writing and arithmetic; (2) agreed that the Department should develop curriculum planning guides to assist local school districts; (3) agreed on a proficiency test (the New Mexico High School Proficiency Examination) for grade 10; (4) drafted a statement to appear on the diplomas of those who passed the test; and (5) agreed that local districts would be responsible for developing remedial programs for those who did not pass the test. These five points constitute the New Mexico Basic Skills Plan, which was approved by the State Board in April 1977 and implemented statewide.

The State Department of Education's role in implementing the plan includes testing at the tenth-grade level and approving implementation strategies adopted by local districts. The Department also provides basic skills guides, in-service training, monitoring, dissemination of information, evaluation of New Mexico's plan, and on-going revision of New Mexico's overall plan. The functions of the local districts include development of local implementation strategies at one or more checkpoints, development of remedial programs, student assessment, curriculum revision for the basic skills, and in-service training.

Phase of implemention. To explain the Basic Skills Plan, the Department of Education held regional workshops for superintendents, directors of instruction, principals and vice-principals in charge of curriculum and instruction, and any other local personnel chosen by local school administrators. Each local district was to be represented at one of the regional workshops.

Local districts were to submit descriptions of three phases of the basic skills plans to the Department as follows:

November 1, 1977 -- Describe process to be utilized in analyzing the existing curriculum.

December 15, 1977 -- Establish anticipated evaluation design to be implemented and identify proposed local checkpoint(s).

May 15, 1978 -- Describe proposed remediation process.

(SDE, 1977b, p. 16).

The local district analysis of the curriculum was to include specification of the points in the instructional program at which each objective of the Basic Skills Plan was to be introduced, expected to be reinforced, and mastered. It was at the time of this analysis that local school districts were also to begin planning for the Writing Skills Appraisal portion of the proficiency examination, since they are required to set the proficiency standards for and administer this portion. Revisions at any time of any of the local district tasks must be submitted to the State Department of Education.

The class of 1981 will be the first to receive diplomas with accompanying statements about the New Mexico High School Proficiency Examination. The tenth-grade class was given the APL portion of the test in February 1979. This class is also to take the Writing Skills Appraisal, which can be administered task by task over a period of time; these results must be reported by the local districts to the Department by 1980.

Goals and Purposes

General goals. The overall goal of the New Mexico Basic Skills Plan is to ensure that high school graduates possess certain basic skills and the ability to apply them to life situations.

Specific purposes. The specific purposes of the plan include competency testing to measure basic skills or life competencies acquisition, curriculum revision to ensure better teaching and learning of basic skills, and remediation for those unable to master the basic skills through regular curriculum offerings.

Competencies

The Superintendent's Basic Skills Task Force identified "a set of basic life competencies, with a subsequent grouping of basic instructional skills necessary to accomplish each competency" because "while schools already are well aware of the value of teaching basic skills such as reading, writing, arithmetic, and problem-solving, it is apparent that not all of the general public is satisfied with the application of these skills as exhibited by high school graduates in life situations beyond school" (SDE, 1977, p. 5). Listed on Table 1 are the mathematics areas for which specific competencies were defined, as well as examples of reading and writing competencies. The complete list of life competencies in mathematics and reading/writing can be found in Appendix 3 of the The New Mexico Basic Skills Plan (SDE, 1977b).

Content area specialists and personnel from local districts devised lists of basic instructional skills necessary for the development of the various life competencies, and constructed learning sequences for these skills. The local school districts must match their curriculum to these sequences by adding areas as necessary in order to ensure that all of the competencies are covered. The Department of Education furnishes the local districts with curriculum planning guides and other technical assistance as needed. Curriculum planning guides, developed by the Department and specialists from local districts, were first made available in the fall of 1977 to assist local school districts in designing the curricula for teaching the basic skills necessary for achieving life competencies.

Standards and Standard Setting

The purpose of setting standards on the New Mexico High School Proficiency Examination is to identify those students who have mastered the life competencies and those students who need remediation. All students in New Mexico schools, except those in the C and D special education levels, must take the APL portion of the proficiency examination in the tenth grade and participate in the Writing Skills Appraisal portion of the examination.

The State Department of Education set a cutoff score of 65% correct on the 200-item APL section of the test, basing its decision on national APL data and on the results of an April 1977 pilot study of a sample of approximately 1,500 New Mexico tenth-graders from 13 high schools. A stratified cluster sampling approach, based on residential community,

TABLE 1

New Mexico's Defined Life Competencies in Mathematics and Reading/Writing*

Mathematics

Application of mathematics skills to the following areas:

1. Time (3 competencies)
2. Distance (1 competency)
3. Rate, d = rt (1 competency
4. Interest (2 competencies)
5. Discount (2 competencies)
6. Money (3 competencies)
7. Budget (4 competencies)
8. Cost Analysis (3 competencies)
9. Filling out Forms (2 competencies)
10. Taxes (2 competencies)
11. Insurance (1 competency)
12. Checking account (1 competency)
13. Loans (2 competencies)
14. Measurement (4 competencies)

TOTAL: 31 competencies

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* The complete list of competencies can be found in Appendix 3 of The New Mexico Basic Skills Plan (SDE, 1977b). According to the Task Force, this list is not intended to represent all of the competencies essential to becoming a productive individual, but rather represents those seen as most important for coping with daily life situations.

TABLE 1 (continued)

Reading/Writing

The following are samples from the list of 52 competencies:

1. The student will be able to read and comprehend a driver's instructional manual.

24. The student will be able to identify the jobs that best fit a specified criteria (such as "part-time," "permanent," "working hours," "salary level") when given a series of want ads.

39. The student will be able to fill out a sample catalog order form.

52. The student will be able to identify and list the names and addresses of the licensing and registration agencies for the individual's state given the appropriate material.

ethnic composition, and geographic distribution, was used to select the sample for this pilot study, which was funded by the Department of Education. A field test, also financed by the Department, involving all New Mexico tenth-graders was conducted in the fall of 1977; 76% received a score of 65% correct or better.

The Department permits local districts--with input from teachers, administrators, parents, and community business people--to set their own standards of proficiency on the specific skills assessed by the Writing Skills Appraisal. The Department does require, however, that students demonstrate mastery, however the local districts define it, through the actual production of writing. The local districts must also submit to the Department either their standards or their plans for verifying that students have demonstrated mastery on the requisite number of tasks. Although local district scorers are to assess writing and check off the skills and tasks as they deem appropriate, the Department of Education does not require the local districts to report student writing skills until 1980.

Target Groups and Testing Schedule

Grade 10 was set as the level for life competency testing for two reasons: (1) there is still school time after grade 10 for remediation, if it is necessary; (2) it avoids excessive testing in the eleventh grade, since grade 11 students participate in a statewide standardized testing program.

The APL test is to take place once a year in February, starting in 1979. All sophomores are to be tested, except for C and D group special education students. Special education students in these groups may take the APL test if they or their parents so wish. Since these students are already in remedial programs, however, the diagnostic function of the APL test would be of little benefit to them. Any sophomore who fails to pass the APL test may retake it in succeeding years through grade 12.

The Writing Skills Appraisal is administered by the local school districts, and scheduling for this test is at their discretion, subject to the overriding requirement that the student Writing Appraisal scores must go to the Department of Education before the student graduates. Since the Writing Skills Appraisal consists of separate tasks which the student must perform, the local district may begin the verification of student writing skills at any grade level the local districts deem appropriate.

The State also requires the local districts to test students on basic skills at least once between kindergarten and the ninth grade. Plans for this checkpoint testing must be submitted to the State; otherwise, the local district is free to select its own test and set its own testing schedule.

Test Instruments

A 200-item version of the Adult Performance Level (APL) test was chosen by the State for one portion of the New Mexico High School Proficiency Examination. The APL test was selected because the objectives listed for this test closely parallel the list of life competencies prepared by the Basic Skills Task Force.

The APL test was developed at the University of Texas at Austin as part of a multi-year adult education project (in which New Mexico took part) unded by the U.S. Office of Education. The test was developed according to a theory of functional competency that includes a taxonomy of five adult life skills applied to five content areas. These content areas are: community resources, occupational knowledge, consumer economics, health, and government and law. The five skills tested are the identification of facts and terms, reading, writing, computation, and problem solving. In addition, there are 20 major objectives linked to the content areas. Unique to New Mexico's version of the test are 10 items to measure competency in each of the major objectives.

A version of the test developed for use in West Palm Beach, Florida was used for New Mexico's initial pilot testing. After reviews by a committee of teachers, administrators, business people, and State content area specialists, separate 200-item custom-developed versions were used in the fall 1977 field study and the February 1979 testing. Each year's test has 150-160 new items, some of which may be recycled from tests administered in years past. Although a 75-item version of the test showed a high correlation with the 200-item test, the State decided to use a 200-item test, with 10 items for each of 20 APL objectives. It was expected that such a test structure would provide reasonbly reliable objective scores as well as total test scores. The 200 items are contained in a single test booklet and answers are recorded on a machine-scorable answer sheet.

To counteract concern that the APL was oriented toward students in the mainstream of American society and therefore inappropriate for New Mexico's rural and diverse population, the designers of the New Mexico forms of the APL deleted some unsuitable test items; future content reviews will ensure the appropriateness of the test items to New Mexico students. Beginning in August 1979, the State is initiating development of multiple-choice items to be used in future versions of this portion of the proficiency examination.

The Writing Skills Appraisal is also based on the life competencies adopted by the State Board of Education. This appraisal sets four writing tasks (an abbreviated message, business letter, description, compare/contrast passage) using 10 writing skills. It is a cumulative paper-and-pencil exercise kept in a folder and administered over a time period determined by the local school district. (The Appraisal was designed more as an instructional component in the program than as a traditional test.) It is completed through the use of a verification checklist method chosen by the State after a review of various other methods by teachers, school administrators, and the State Superintendent's Basic Skills Task Force. A verification checklist appears in Figure 1.

Test Administration

The APL is given statewide once a year under the supervision of the State and the local Test Coordinators. The local district is responsible for ordering test materials from American College Testing (ACT) and for providing personnel to be trained in the one-day test administration workshop conducted by the Evaluation Unit of the State Department of Education. The local school district must test all tenth-graders (except C and D level special education students, unless they wish to take the test) during the state-specified morning sessions of 2-1/2 hours each (preferably not on Monday or Friday). This schedule is suggested to minimize student fatigue resulting from too much testing in one day and student absenteeism resulting from sessions spread over too many days. Provision must be made to test absentees from the regular sessions at some other time during the testing week. If a student is not able to take the complete test, he or she must retake the test during the regular testing period the following year. After the testing period, the local district must return all manuals, test booklets, and answer sheets to ACT, prior to distribution by ACT of that district's test reports.

The time and manner of administration for the Writing Skills Appraisal is determined by the local district. Suggestions for implementation of the test can be found in the Student Writing Skills Appraisal and Verification Procedures Manual distributed by the State in November of 1978. It is suggested in the Manual that, since writing cannot be divorced from content, other teaching staff in addition to those in the language arts area should be involved in the verification process.

Scoring and Analysis

ACT is responsible for distributing and collecting test booklets and answer sheets, maintaining test security, and scoring and reporting results to local districts. Total test scores, skills area scores, content area scores, and content area objective scores are compiled for individuals and groups by ACT and sent to the local districts.

Local districts score the Writing Skills Appraisal. Educational Testing Service (ETS) ran five workshops for local personnel on holistic scoring as a method of evaluating written material.

Reporting/Dissemination

ACT reports results of the APL to the local districts for individual students and for the following groups: each high school, each multi-high school district, and the entire state. Scores were also reported by group for males and females, for various racial/ethnic groups, and by predominant language background.

Use and Implications of Test Results

Consequences to students. Failure to pass the proficiency examination by the time of graduation does not prevent a student from graduating and receiving a diploma, nor does passing the test at an earlier date allow a student early exit from high school.

Results of both parts of the proficiency examination are entered on the Individual Student Report. Results of the proficiency examination are also to appear on student transcripts.

Beginning with the class of 1981, each student's diploma will contain a statement about the minimum competency testing program and a diploma endorsement if the student has passed the proficiency examination. Only the total test score is considered in assessing the performance of a student. If a student passes the test (performs at or above the standard) he or she receives the following diploma endorsement:

"This is to certify that this person has satisfactorily completed the requirements of a minimum competencies examination administered on ________ by the New Mexico State Board of Education.

Local Board President

(SDE, 1977, p. 9)

A student who passes the examination need not be further involved with the testing process. A student who does not pass the test must be offered remedial instruction, and must take the test again at the regular testing time the following year. Results of the test will also appear on the student's final transcript.

Consequences to programs. Providing remedial programs for students testing below the standard at any checkpoint is mandatory. The method of remediation is the responsibility of the local district. The State's definition of remediation is "special instruction for students who fail to pass the basic skills testing program. This special instruction must have the purpose of teaching the students those basic skills in which they are deficient, so that they can pass subsequent testing" (SDE, 1977b, p. 11). Retention of students is not seen as an adequate means of remediation.

The Basic Skills Plan was not intended to drastically change local and State programs or to initiate new ones. It was meant to furnish ongoing evaluation and revision aimed at improving student competency in basic skills. Another aim of the plan is to see that more time is devoted to teaching basic skills. Analysis of student performance by local districts can also provide data for curriculum revision.

Provisions for Special Populations

In order to keep a close check on potential discrimination in its test, the State conducts item analysis (and is exploring item scaling) for ethnic and racial subgroups identified by student responses to questions about ethnic background and language spoken at home. Some ethnic groups have consistently scored low on the various administrations of the APL, but no special curriculum or test administration provisions have been made for these groups. Local districts are, however, responsible for offering appropriate remediation to any students who do not pass the test.

There may be special provision in the future for the visually handicapped; the New Mexico School for the Visually Handicapped is now developing a parallel assessment of minimum life competencies for these students.

Program Resources and Costs

General program staffing. The Superintendent's Basic Skills Task Force initiated the Basic Skills Plan and made recommendations to the State Board of Education. The Evaluation Unit of the State Department of Education did most of the research on testing in order to furnish information and technical assistance to the local districts.

Most of the staff for implementing the Basic Skills Plan (teachers, test administrators, scorers for the Writing Skills Appraisal, district test coordinators, curriculum specialists, administrative staff) is provided by local districts with some technical assistance available from the State.

Committees for review of each year's APL test are made up of both State and local personnel.

Scoring of the APL is contracted out to ACT; there are no internal resources at the present time for scanning and scoring of answer sheets.

Approximate costs. Local districts are responsible for most of the staffing, and, therefore, bear most of the costs of the implementation of the Basic Skills Plan. In addition, during 1978-79 the local districts must pay $2.50 per student directly to ACT for the printing and scoring of the APL test. Costs for 1979-80 are estimated to be approximately $3.20-$3.25 per student.

Funding sources. In New Mexico, 80% of the money for public schools is provided by the State legislature out of State funds. Public school budgets are overseen by a Public School Finance Division, separate from the State Department of Education. The State Department of Education funded the pilot and field study administrations of the APL. Future funding for the annual testing will come from local school districts, although the State Department of Education will support test development activities.

Program Evaluation

The State will initiate a review of the Basic Skills Plan during the 1979-80 school year. Two questions on the APL test regarding the realism of the problems presented and the usefulness of the knowledge needed for the test brought favorable responses from students.

It appears that the proficiency testing at grade 10 represents an actual decrease in the amount of testing of New Mexico students since the statewide objectives-based testing of students in grades 6, 9, and 12 became a local option in 1976.

Future Directions

It is expected that the Basic Skills Plan with its ongoing evaluation and revision processes will help the local districts to improve their curriculum in basic skills and, thus, improve student competencies in these areas.

The State expects to continue testing with a multiple-choice test based on the APL goals and objectives, and the Writing Skills Appraisal.

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NEW YORK

New York State's competency testing program has two major emphases: (1) establishing standards of proficiency in the basic skills for the high school diploma and (2) providing remedial instruction to students who need special help in developing their basic skills. A new set of Regents competency tests in reading comprehension, writing, and mathematics has been developed for administration in high school; these tests are currently being phased in and will serve as both the core of New York's competency testing program and as a partial requirement for a high school diploma. A set of tests, the "basic competency tests" in reading, writing skills, and mathematics which were developed in the early 1970s, have been used as a partial requirement for a high school diploma, but are scheduled to be phased out entirely by January 1981. For the high school diploma requirement, a passing score in the comprehensive Regents examination in English or in any mathematics Regents examination may be substituted for the related Regents competency test; a satisfactory score on one of two standardized college admission examinations also may be substituted for the Regents competency tests.

The program provides several checkpoints for early identification of pupils who appear to need remediation in order to successfully pass the Regents competency tests. Pupil Evaluation Program (PEP) tests are administered to all students in grades 3 and 6; these tests are designed to measure reading and mathematics skills and to provide diagnostic information about elementary school students. Preliminary competency tests have also been developed in reading comprehension and writing to be comparable to the Regents competency tests. Students in grades 8 and 9 must be administered these tests for screening purposes, if they have not met the state-specified performance level on the PEP tests in sixth grade or on a nationally standardized achievement test in grade 8 or 9. Schools are required to provide remedial instruction to pupils who score below State Reference Points on the PEP and Preliminary Competency Tests or who fail the Regents competency tests.

Legislative and Policy History

Policy history. New York's educational programs and policies are under the jurisdiction of the Board of Regents, a separate body elected by the State legislature and responsible in turn for electing a Commissioner to head the Department of Education. Aware that the basic competency tests first piloted in 1975-76 had become targets of criticism on the bases of cost, content, and level of difficulty, the new Commissioner, as of July 1977, and the Education Department completed the development of a revised program of competency testing and submitted this program to the Board of Regents.

The Board of Regents approved the proposed revised program in the spring of 1978. At this time the Board considered a variety of alternative forms of assessment which included norm-referenced testing, teacher judgment of student achievement, and criterion-referenced testing, and then selected criterion-referenced testing. In July 1978, the Regents agreed that the new program would offer separate tests in reading comprehension, writing, and mathematics. Tentative performance standards were set in these three areas, and a 36-page information booklet (State Education Department, 1978a) was prepared for statewide distribution to educators and the general public. In addition to a discussion of the new program's philosophy and goals, detailed descriptions of the three tests, and numerous pages of examples from each test, this publication included returnable questionnaires. Reactions were solicited by the Regents at a series of 12 Regional Conferences. Public reactions were also sought via a newspaper campaign, and educator/teacher reactions were sought from a representative 20% sample of school buildings (State Education Department, 1979b). The reactions to the tentative standards were favorable, and at its meeting in March 1979 the Board of Regents adopted them as final standards of proficiency which each student must meet to earn a high school diploma.

Phase of implementation. It was decided that students who passed either an appropriate Regents examination or college admission examination would not be required to also pass the competency tests in reading, writing, and/or mathematics. Students who either did not take or failed such examinations, however, would have to meet the requirements outlined below in order to receive their diplomas. Since the program is in transition, these requirements change from year to year until 1981 and are, therefore, listed for students graduating during the period specified.

(1) June 1, 1979--May 31, 1980: Students must demonstrate proficiency by passing the existing basic competency tests in reading and mathematics.

(2) June 1, 1980--May 31, 1981: Students must demonstrate proficiency by passing the existing basic competency tests in reading, mathematics, and writing.

(3) June 1, 1981 and thereafter: Students must demonstrate proficiency by passing the new Regents competency tests in reading comprehension, writing, and mathematics.

Competency tests in New York are administered in January, June, and August of each year. The last administration of the existing basic competency tests will be in January 1981. At that point the transition from these existing tests to the new Regents competency tests will be complete.

Goals and Purposes

General goals. The basic philosophical position of New York's Board of Regents is that "one of the most important responsibilities of the elementary and secondary schools is . . . teaching young people to read with comprehension, to write effectively, and to make proper use of mathematical concepts and operations" (State Education Department, 1978b, p. 1). This philosophy pervades all of the work associated with the development of the new Regents competency testing program and the integration of this program with existing testing and examination components.

Specific purposes. The specific goals of New York's overall competency testing program are two-fold: "to assure the early identification of students who need special help in developing . . . skills" and "to assure that students have acquired an adequate competence in these skills before receiving a high school diploma" (State Education Department, 1978b, p. 1). The new preliminary Regents competency tests and the existing Pupil Evaluation Program tests represent approaches to the diagnostic goal, while the new Regents competency tests themselves represent the major approach to the goal of proficiency required for a high school diploma.

Competencies

Since New York's existing basic competency tests are being phased out and since both the end-of-course Regents examinations and the two standardized college admission examinations represent "alternative routes" to the goal of demonstrating proficiency, these instruments will not be considered here. The discussion which follows will focus instead on the new Regents competency tests in reading, writing, and mathematics. (The preliminary competency tests in reading and writing are similar to the Regents competency tests in content, format, and administration and thus do not require separate discussion.)

Reading Comprehension. With the assistance of funds from the Carnegie Foundation, New York's new Regents competency test in reading, also known as the Degrees of Reading Power, has been developed over an eight-year period by an outside contractor and the staff of the Department of Education. Using a Cloze-related technique, the test makes use of informationally complete nonfiction prose passages. Two basic competencies are measured: a student's understanding of the meaning of individual sentences; and a student's ability to derive meaning from connected prose text involving many sentences. The Rasch model is employed to equate the test from one year to the next. The model is also used to determine which cut score corresponds to the Regents requirement for .65 success on materials as difficult as those used in required high school courses. (See Table 1 for an overview of competencies measured by the Regents competency test in reading as well as competencies measured by the separate tests in writing and mathematics.)

Writing. The new Regents competency test in writing was designed by an outside contractor and the staff of the State Education Department. This initial design was reviewed by a National Advisory Panel. In its present form, the test measures "a student's ability to organize and present ideas in written form at an acceptable level of proficiency in language skills" (State Education Department, 1978b, p. 11).

Mathematics. The new Regents competency test in mathematics is the most traditional of the three new tests. Developed by the staff of the State Department of Education, the test draws upon basic topics outlined in that Department's syllabus General High School Mathematics (1978a) to measure students' proficiency in seven mathematical areas. Table 1 provides an overview of these seven areas and the competencies which each entails.

TABLE 1

Specific Competencies in Three Content Areas Required for High School Graduation

Reading Comprehension

Students will be able to demonstrate a satisfactory level of reading comprehension by selecting words for insertion into a prose passage, thereby showing their:

(a) understanding of the meaning within individual sentences;
(b) ability to derive meaning from connected prose text.

Writing

Students will be able to demonstrate a satisfactory level of language skills by writing:

(a) a business letter;
(b) a report based upon data supplied;
(c) a statement of about 200 words designed to persuade a specific audience.

Mathematics

Students will be able to demonstrate a satisfactory level of mathematics skills by answering questions involving:

(a) integers;
(b) rational numbers;
(c) graphing;
(d) geometric figures;
(e) ratio, proportion, and percent;
(f) probability and statistics;
(g) consumer and job-related mathematics.

Standards and Standard Setting

The State Education Department prepared and distributed 80,000 copies of a document entitled The Regents Competency Testing Program: Setting Standards in the Basic Skills as a Requirement for High School Graduation (1978). This 36-page document contained a discussion of the new program's philosophy and goals, detailed descriptions of the new tests, and numerous pages of examples of each of the three tests. It also described and gave illustrations of the tentatively set standards in the three skill areas. The document included a questionnaire requesting respondents to "indicate your views on what the standards should be in each skill area for graduation from high school in New York State by marking the appropriate point on each of the three nine-point scales."

Using this document as a basis for discussion, reactions to the tentative standards were solicited by the Regents at 12 Regional Conferences. Professional, business, labor, educational, and other statewide organizations and associations were invited to participate and offered supportive professional staff services in obtaining reactions from their memberships. Public reactions were also sought through a specially-prepared series of newspaper materials which included program descriptions, examples of the tentative standards and coupons with the nine-point scales on which to mark reactions. Government officials, legislators and their staffs, and media personnel were briefed and given opportunities to contribute reactions. In addition, reactions were obtained from the administrators and teachers in a representative 20% sample of school buildings.

All of these activities were spread over a seven-month period; the tentative standards were set in July 1978 and the final standards were to be adopted in February 1979. During this time, the competency program remained a continuing item on the agenda of the monthly meetings of the Board of Regents. These monthly meetings were open to the public and were attended by the news media. Information obtained from these activities was reported and discussed openly, and it gradually became apparent that the sentiment for setting standards was favorable and that the tentative standards were acceptable to all segments of society. By February 1979, when the final standards were adopted, the major focus had changed from the standards themselves to providing the remediation aspects that would be required to assure that students could meet them.

Reading Comprehension. Having reviewed input from State Education Department staff and other professionals in education, the Regents determined at their meeting in February 1979 that a 65% level of success in comprehending materials as difficult as those used in required high school courses would represent a minimum level of achievement for satisfactory completion of the Regents competency test in reading (Byrne, 1979).

Writing. In the rating process for the new Regents competency test in writing, a student's response for a particular task is compared to a set of exemplary model answers for that task, using the holistic method of scoring (scoring for total effect). The rater's judgment about the general level of writing ability indicated by a student's response in comparison to that represented by the exemplary model answers is expressed in terms of a percentage score. Each of the three responses written by a student must be rated by a different person; these three separate scores are then averaged to determine the student's test score. After reviewing input from the State Education Department staff and other professionals in education at the February 1979 meeting, the Board of Regents established that students must obtain an average score of 65% for their three pieces of writing in order to demonstrate a satisfactory minimum level of writing proficiency.

Mathematics. The information booklet (State Education Department, 1978a) contained a sample set of questions for the new Regents competency test in mathematics. As with the new reading comprehension and writing tests, for a test made up of items similar to those in the sample set, the Board of Regents reviewed the full array of reactions and concluded by setting a score of 65% as a minimum standard by which a student could be considered to have achieved a satisfactory level of proficiency in mathematics.

Target Groups and Testing Schedule

All students in New York State are required to meet specific standards of competency in order to receive high school diplomas. Once the new program is completely phased in, every student, in order to become eligible to receive a diploma, will have to pass the Regents competency tests in reading, writing, and mathematics unless he or she has passed the regular Regents examination in English or mathematics or has passed the appropriate standardized college admission examination. Beginning in the eleventh grade, students will be able to take the Regents competency tests in reading and writing in January, June, and/or August of each year, and to continue retaking the tests until they pass both. Because students have to complete only a newly designed one-year high school mathematics course before taking the Regents competency test in mathematics, most students will be able to take this test at the end of the ninth-grade year. Failing students will be able to continue taking the test each January, June, and August until the test is passed. New forms of each Regents competency test will be prepared for test administration.

The new preliminary competency tests will be required for all students scoring below the median on a nationally-standardized reading test administered in the seventh or eighth grade, or below the median on the Pupil Evaluation Program reading test administered in the sixth grade. Preliminary competency tests will be offered in reading and writing but not in mathematics.

It is expected that about 50% of New York's students will take the Regents competency tests. The remaining students are expected to meet the required competency standards by taking the regular Regents examinations or standardized college admission examinations.

Test Instruments

Reading Comprehension. The new Regents competency test in reading consists of 12-15 informationally complete prose passages, each about 300 words in length and each with seven words deleted from the text. Students are given five alternative words for each deletion or blank and must determine which of the five is most appropriate. Thus the test allows the student to select a total of 84-105 appropriate words. The standard set by the Regents requires that students must be able to comprehend at a 65% mastery level reading material that is at least as difficult as the textbooks they use.

Writing. As shown in Table 1, the new Regents competency test in writing requires a student to generate three separate writing samples: The first exercise calls for a business letter registering a complaint and requesting corrective action (e.g., the student responds to a hypothetical situation in which a camera ordered by mail has not arrived). The second exercise calls for a report based upon data supplied (e.g., the student writes an account of a sporting event utilizing facts supplied about the event). The third writing exercise calls for a statement of about 200 words designed to persuade a specific audience (e.g., the student writes to the Board of Education to recommend that a particular subject be added to the curriculum). A list of 25 separate topics for each of these three types of exercises has been prepared by the State Education Department staff with the help of a special steering committee of teachers. This list of topics will be distributed to schools early in the fall of 1979. The test questions will be based on this list of topics.

Mathematics. The Regents competency test in mathematics requires students to answer 60 questions covering the seven core areas outlined in Table 1. Approximately one-third of these questions are of the open-ended variety for which the student must supply the correct answer. The remaining questions are in a multiple-choice format requiring students to select the correct answer from four alternatives.

Test Administration

The State Department of Education will follow the procedures for test administration that are described in the Regents Examination Manual (1976). As it does for the regular Regents examinations, the Education Department will distribute the new Regents competency tests in locked metal boxes shortly before each testing date. Teachers will be responsible for administering the test under the supervision of the building principals. Students will be allowed as much time as they need to complete each of the tests. It is expected, however, that most students will not require additional time beyond the usual three-hour period allowed for a regular Regents examination.

Scoring and Analysis

Test scoring and analysis will be carried out by local school districts with a sample of the reading and mathematics papers (approximately 5%) being sent to the State Education Department for verification.

Answer sheets that may be either machine-scored or hand-scored will be provided for the reading and mathematics tests by the State Education Department. Schools with the appropriate facilities can machine-score these tests; in schools without these facilities, the answer sheets can be scored manually, using scoring templates.

As noted, the writing test will be scored holistically, using a set of exemplary model answers for each of the test's three exercises. These exemplary model answers, which will be provided by the State Education

Department, will be ones considered to be worthy of a 100% score. State Education Department staff have conducted approximately 30 workshops at regional centers around the State to train teachers in the holistic scoring method to be used for the Regents competency test in writing. Schools will be required to send all writing answer papers with scores of 60% and above to the Department, where the local school ratings will be reviewed by a group of rating specialists to be recruited and trained by the State Education Department. In the event that State and local raters disagree, the Department will be the final authority.

Reporting/Dissemination

The Board of Regents has set no special requirements concerning public dissemination of information related to the new Regents competency tests. Such information is available to the public, however, and may be obtained by interested citizens and/or media representatives. Information on scores and on individual remedial plans must be sent by the local districts to parents whose children fail one or more of the tests. The data from all the tests a student takes become part of his or her permanent record. Schools are required to maintain up-to-date listings of students with scores below acceptable levels.

Use and Implications of Test Results

Consequences to students. Students cannot receive local high school diplomas in New York unless they pass the appropriate Regents competency tests or specific alternatives. Certificates may be issued only to mentally retarded students as stipulated in the State regulations. The Board of Regents does offer an external high school equivalency diploma to adults who demonstrate competencies through activities outside of normal educational programs. It also offers a Regents high school equivalency diploma based upon passing the General Educational Development (GED) test. The State is checking, however, to ensure that neither of these alternative diplomas becomes a strategy for obtaining a high school diploma without meeting competency requirements.

Consequences to programs. The new Regents competency tests have several consequences to the programs for pupils with marginal and below-standard proficiency in basic skills. The per capita allocation made to local school districts based in part upon the number of third- and sixth-grade students scoring below the statewide reference points on the reading and mathematics tests of the Pupil Evaluation Program will continue. The Degrees of Reading Power test, however, is being substituted at the sixth-grade level for the present norm-referenced test so that the instructional advantages from this type of test can be realized. A new writing test is being developed and will be incorporated into the program as a new checkpoint as soon as it is ready.

As a result of the new preliminary competency tests, new types of remedial programs are mandated for low-scoring students. Both the Department and the schools are engaged in reallocating resources so as to design these programs and provide the services that are needed to make remedial instruction effective. Completion of a one-year high school mathematics course has been added to the requirements for the high school diploma. The newly prepared syllabus for this course is the basis of the standards in the new Regents mathematics competency test.

Provisions for Special Populations

The State Education Department has outlined a number of alternative testing techniques for pupils with handicapping conditions and limited-English-speaking pupils (State Education Department, 1979b). These alternative techniques include: extending test time limits; administering tests in special locations; reading tests aloud; recording answers in alternative manners; allowing use of a calculator or abacus; omitting questions and prorating credit; and providing tests printed in Braille or large type.

Handicapped students meeting the requirements for alternative testing techniques may be: emotionally disturbed; individuals with specific learning disabilities; individuals with specific health, speech, or language impairments; deaf or hard of hearing; orthopedically impaired; or visually impaired.

Limited English-speaking students may meet competency requirements through alternative testing techniques if at some point after the eighth grade they entered schools in which the predominant language of instruction was English.

Program Resources and Costs

General program staffing. The testing program is a responsibility of the director of the Division of Educational Testing within the State Department of Education. The Director is responsible for coordination of all activities in test development, administration, and reporting. The program is supported by a staff of two full-time testing professionals and the part-time services of Department subject specialists, aided by selected teacher consultants. Responsibility for remediation is located in the instructional and curriculum offices within the Education Department.

Approximate costs. Approximately $500,000 a year is being spent by the State Education Department on test development, personnel, printing, and other expenses for the new Regents competency test program. Except for inflation, this figure is expected to remain relatively constant. Initial scoring costs are assumed by local school districts.

Funding sources. Outside funding from the Carnegie Foundation originally provided over $1,000,000 for the development and validation of the Degrees of Reading Power test which is being used for the new Regents competency test in reading. These monies aside, all funds for the Regents competency testing program are allocated to the State Education Department by the New York State Legislature.

Program Evaluation

Although no overall evaluation of the new Regents competency testing program has yet been carried out, tests are subject to ongoing review. The validity and reliability of the tests are continuously evaluated. Special efforts are made to ensure that the tests are not biased. Periodic evaluation of the management of the program is carried out in order to improve program operating procedures. Once the program has been fully implemented, it will be evaluated in terms of its long-range effect on achievement test scores in reading, writing, and mathematics.

Future Directions

Once the current basic competency tests have been completely replaced by the new Regents competency tests in reading, writing, and mathematics (and by their preliminary counterparts in reading and writing), New York's Education Department plans no major program changes in the near future. Emphasis will be placed upon improving instructional programs and streamlining the allocation of resources so as to improve pupil performance at all grade levels.

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NORTH CAROLINA

In reaction to a perception of low achievement among many North Carolina students, the North Carolina General Assembly, with the endorsement of the Governor, passed two laws which established the Annual Testing Program and the Competency Testing Program in North Carolina. The Annual Testing Program, designed to ensure that students will receive maximum benefit from their educational experience and that the educational process will be effectively monitored, called for a statewide annual assessment in grades 1, 2, 3, 6, and 9 beginning in April of 1978. The Competency Testing Program was designed to make sure that high school graduates possess minimum skill levels thought necessary to function successfully as citizens. The Competency Testing Program began testing eleventh-graders annually in reading and in mathematics in November 1978. The legislation also required that the Governor appoint Commissions to select the tests in both programs and make recommendations to the North Carolina State Board of Education.

Legislative and Policy History

Policy history. In 1977, the General Assembly of North Carolina enacted two statutes on testing: (1) General Statute 115-320 (Article 39A) [H.B. 204], legislating the High School Competency Testing Program; and (2) General Statute 115-320 (Article 39B) [H.B. 205], legislating the Annual Testing Program. Prior to the passage of these statutes, statewide assessment of student school achievement had been a regular activity in the State. Testing of competencies for graduation became of interest to legislators who were concerned with providing for general student accountability. The present governor also campaigned for minimum competency testing.

The purposes of the High School Graduation and Competency Program were threefold: (1) to make sure that all high school graduates acquire the minimum skills and the knowledge needed to function in society; (2) to furnish a method for identifying the strengths and weaknesses in the education process; and (3) to provide additional means for making the educational system accountable to the public for results. The State Board of Education was assigned the task of final test selection, the development of graduation standards, and implementation. All eleventh-grade students in public schools are to be tested annually. The bill stipulates that failing students are to be given remediation and retested only in those areas in which they failed. The statutes also made provisions for nonpublic schools, stating that the State Board of Education may require the implementation of the testing program in these schools.

The Annual Testing Program, on the other hand, requires assessment of basic skills achievement in grades 1, 2, 3, 6, and 9.

The position of nonpublic schools with regard to the testing programs presents a problem because of the resistance to the competency tests on the part of private church schools. In May 1979, the North Carolina General Assembly passed two laws addressing the issue of competency testing in nonpublic schools. Article 32B of Chapter 115 of the General Statutes (Senate Bill 526) deals generally with nonpublic schools while Article 32A of Chapter 115 of the General Statutes of North Carolina (Senate Bill 383) deals specifically with private church schools and other religious schools.

Article 32B requires the nonpublic schools to administer at least once each school year a nationally standardized test to all students in grades 1, 2, 3, 6, and 9. The test must measure achievement in the areas of English grammar, reading, spelling, and mathematics. In addition, each nonpublic school must administer at least once each school year a nationally standardized test to all students enrolled in grade 11. Nonpublic schools are responsible for establishing minimum standards and must make available the results of these tests to the designated official responsible for the nonpublic schools. If they choose to, nonpublic schools may voluntarily participate in the State program.

Article 32A, dealing specifically with private, church, and other religious schools, requires, with one exception, the same testing procedures for these schools as Article 32B for nonpublic schools. The nationally standardized test selected for eleventh-grade students must test for competency in verbal and quantitative areas.

Since Article 39A deals specifically with minimum competency testing in North Carolina's public schools, its provisions will be described and emphasized throughout. The other bills will be discussed further only as they relate to the High School Graduation and Competency Program.

Phase of implementation. In the spring semester of 1978, the high school competency test was administered to public school eleventh-graders on a trial basis. In accordance with Article 39A of Chapter 115 of the General Statutes, the State Board of Education has adopted "minimum levels of performance" for graduating high school seniors. The annual testing of all eleventh-grade students for competency for graduation began in the fall of 1978 under the supervision of the Department of Public Instruction.

The two Senate bills addressing the testing requirements for nonpublic schools and Christian church schools went into effect immediately upon ratification in May 1979.

Associated litigation. North Carolina's General Assembly and Department of Public Instruction have faced several legal challenges with respect to their graduation competency requirement.

In November 1978, the Southern Christian Leadership Council, on behalf of a tenth-grade black student who had failed the tenth grade, but who had not actually taken the graduation competency test, argued that the test violated equal protection laws. The case (Green v. Hunt, et al.) was dismissed in April 1979.

In December 1978, North Carolina was preparing to sue Christian schools for noncompliance with the testing programs outlined by the General Assembly in Articles 39A and 39B of Chapter 115 of the General Statutes. However, the nonpublic schools filed against the State, arguing that their First Amendment right to privacy had been violated. North Carolina then filed a counterclaim through the Attorney General's Office ordering compliance. The litigation is moot due to passage of Senate Bills 383 and 526, Articles 32A and 32B of Chapter 115 of the General Statutes.

The possibility exists that future legal action may be taken against the State. Lawyers in the Attorney General's Office, as well as the Department, believe that extensive measures have been taken to assure the legality of the statutes. The availability and success of remedial programs for those who fail will strengthen the legitimacy of the Competency Testing Program.

Goals and Purposes

The purposes of the testing programs are to: (a) assess the effectiveness of the educational process, (b) ensure that each pupil receives the maximum educational benefits from the educational process, (c) identify and correct student needs in the basic skills, (d) assure that all high school graduates possess skills and knowledge necessary to function in an adult society, and (e) make the educational system more accountable to the public.

Competencies

In accordance with Articles 39A and 39B of Chapter 115 of the General Statutes, the Governor appointed a Competency Test Commission and an Annual Testing Commission in 1977. The Competency Test Commission is composed of 15 members who hold office for four years. According to Article 39A, five members of the Competency Test Commission must be high school teachers or principals, five must be citizens who are interested in education, two must be professional educators from the faculties of institutions of higher education in the State, two must be persons competent in psychological measurement, and one must be a local school superintendent. The Superintendent of Public Instruction, or his designee, also serves as an ex officio nonvoting member of the commission. The Competency Test Commission recommends to the State Board of Education both the competency areas and the corresponding tests for use in the examination of eleventh-graders. The Competency Test Commission has determined, at least initially, that "functional" reading and mathematics are the most important skill areas. By "functional" is meant the ability to apply reading and mathematical skills to practical life situations; because of the short implementation timeline, the Commission limited its choice to reading and math in the belief that the skills in these areas are the most critical to survival in society.

After consulting with content specialists and secondary school teachers in the State, the Competency Test Commission developed a list of specific test objectives in reading and mathematics that reflected minimum curriculum content in the North Carolina schools. The list was developed by collating lists of objectives obtained from schools throughout the State. Once a final set of objectives had been developed, it was disseminated to reading and math content specialists and secondary school teachers for ranking in order of importance. It was on the basis of these rankings that the Commission made its final recommendations. Table 1 lists the 10 reading objectives and the 11 mathematics objectives recommended to and adopted by the State Board of Education in June 1978.

Standards and Standard Setting

To determine competency test standards, the Competency Test Commission conducted several studies, including a review of competency test standards from several other States; a comparison by the Department of Public Instruction of two groups of students--judged to be either minimally

TABLE 1

North Carolina Competency Objectives for Reading and Mathematics

Reading

1. The student will demonstrate word knowledge and use contextual clues and abbreviations to determine word meaning.

2. The student will read and follow written directions accurately.

3. The student will read and select the main idea and related details.

4. The student will read and classify information.

5. The student will read and draw inferences from various reading materials.

6. The student will read and draw conclusions.

7. The student will compare and contrast various materials.

8. The student will read and organize information using various types of materials.

9. The student will locate and apply information.

10. The student will interpret maps, charts, and pictures.

TABLE 1 (continued)

Mathematics

1. The student will be able to compute using whole numbers.
2. The student will be able to compute using fractions.
3. The student will be able to compute using decimals.
4. The student will be able to compute using percents.
5. The student will be able to solve problems involving money matters.
6. The student will be able to solve problems involving measurement.
7. The student will be able to use geometric ideas in solving everyday problems.
8. The student will be able to read, interpret and use maps, graphs, charts, and tables.
9. The student will be able to use and apply knowledge of probability and statistics to everyday situations.
10. The student will be able to estimate answers to problems.
11. The student will be able to solve problems involving addition, subtraction, multiplication, and division of whole numbers, fractions, decimals, and percent.

competent or incompetent--selected at random from 120 schools across the State of North Carolina; an assessment of the tests by teachers who were specialists in reading and mathematics; and a statistical study of the spring trial distributions. Taking all these studies into consideration, the Competency Test Commission used its professional judgment in establishing competency standards which best met the consensus of the data from all relevant studies. The Competency Test Commission recommended and the Board accepted competency standards of 72% in reading and 64% in mathematics. Further work will be done to revalidate the standards at a later time.

Target Groups and Testing Schedule

As mandated by the legislature, the competency testing program applies to eleventh-graders only, while the annual testing program applies to students in grades 1, 2, 3, 6, and 9. All students in the grades tested must participate.

The competency testing, designed to certify skill levels for graduating seniors, takes place in grade 11 so that students who fail the tests can be helped to improve their skills in a remediation program. Testing is conducted during the fall of each year in order to provide remediation in the same year for students in need of additional instruction. The annual testing program is aimed at students just beginning their school experience so that skill deficiencies can be detected early.

Test Instruments

The legislation delegates to the Competency Test Commission the responsibility for selecting appropriate competency test instruments. The Commission followed a two-step approach. First, the Competency Test Commission reviewed all commercial tests in the areas of reading and mathematics to determine which tests best satisfied the purpose of the testing program and manifested the least cultural bias. The Competency Test Commission chose the Senior High Assessment of Reading Performance (SHARP) and the Test of Proficiency in Computation Skills (TOPICS). Secondly, a subcommittee composed of two Competency Testing Commission members and six representatives of minority groups searched for indications of bias by applying intuitive analysis and statistical methods to the results of the initial field tests of the SHARP and TOPICS tests; unusual response patterns were viewed as indicating the presence of some kind of bias. The subcommittee modified some items to eliminate potential sex bias. The publisher of these tests agreed to make the changes in the tests provided to North Carolina.

The number of items per objective on each test varies according to the objective, but both tests have a total of 120 items each. Two new test forms are now being produced to be used concurrently with the present forms so that an equating study can be accomplished in the fall of 1979. After next fall, the new forms, which have approximately the same number of items per objective, will be rotated with the first version.

Test Administration

The State Department of Public Instruction decided to produce its own test administration manuals rather than use the manuals published by the publishers of the competency test instruments. The State Board of Education requires local school districts to administer the North Carolina competency tests and to select its own test administrators and proctors. A test administrator and at least one proctor are required for a group of students "of typical class size." However, large group testing is permitted in appropriate circumstances. The responsibilities of the test administrator and the proctor, and the test administration rules and procedures are set out in the manual. In general local districts are responsible for maintaining test security and handling any irregularities that occur in test administration.

Scoring and Analysis

Scoring has been done by test publishers or scoring contractors, but the score report forms were designed by the State Department of Public Instruction. For each student, the following scores are computed: total number of items answered correctly in reading and in math; number of correct responses on each set of items of a certain type within an objective; and percent correct on each objective. The total number of items on each test and of each type within an objective, as well as the passing score on each test, are also reported on the score report form for individual students.

Reporting/Dissemination

Individual student scores are reported on the score reports described above to respective schools and parents and become part of the student's cumulative record. Local school districts also receive a roster of student scores by grade. Statistical summaries of passing rates are produced by school/unit (e.g., public, nonpublic, extended day, etc.), by sex and ethnic group (American Indian, black male, black female, white male, white female), by amount of parent education, by handicapping condition (none, educable mentally retarded, multiple handicaps, hearing impaired, visually impaired, learning disabled, other), and by remedial program (reduced class size, basic skills lab, CETA-SES lab, tutorial, other). Reports of test results are produced by the State Department of Public Instruction. The results of these statistical studies are released to the public in a press conference scheduled by the State Department of Public Instruction. The Public Information Unit of the State Department of Public Instruction also sends out news releases and reports to the news media on the interpretation of the reports.

Besides reporting test results, the Department of Public Instruction also prepares materials for students and parents about the competency testing program. These include information about what the program involves, why it exists, who must take the tests, what general skills the tests will measure, and how to take the tests.

Use and Implications of Test Results

Consequences to students. In order to graduate from a North Carolina public high school, a student must pass both the reading and mathematics competency tests and meet other course requirements set forth by the North Carolina State Board of Education and local school boards. A student who fails one or both of the competency tests may receive a certificate of performance if all other work requisite for graduation has been completed.

Through the North Carolina State Community College System, a student may receive a high school equivalency certificate or a diploma through the adult high school program. A student is not required to pass the high school competency tests in order to receive an equivalency certificate, but must pass these tests in order to receive a diploma.

The legislation requires that students who fail the tests receive remediation. The State Board has assigned the task of providing remedial instruction to the local school districts.

Consequences to programs. The only program change mandated by the legislation has been the requirement for remedial instruction. However, other changes have occurred. According to the Department of Public Instruction, teachers have become more alert in their efforts to locate student weaknesses. The result has been an earlier-than-normal identification of student learning needs and correspondingly earlier-than-normal remedial instruction courses.

While all eleventh-graders are expected to take the competency tests, there are provisions for individual students (e.g., severely handicapped students) to request exemption from testing. The request, in the form of a written application for exclusion, is to be submitted by the student and, if the student is under 18 years of age, the student's parents to a local school-based committee. In the application, the student and the student's parents acknowledge that they are cognizant of the consequences of exclusion from testing, i.e., that the student will not receive a regular diploma without taking and passing the competency tests. The student may, at any time, decide to take the competency tests, whereupon after passing the tests, he or she again becomes eligible for a regular diploma.

The Department of Public Instruction has also developed special editions of the competency tests for some students. Large-print, Braille, and taped editions are available to students who are blind, visually impaired, or learning disabled. Handicapped or special education students requiring special administration are handled on a case-by-case basis by the Department of Public Instruction in conjunction with the local school districts.

Program Resources and Costs

General program staffing. The legislation initiating the competency tests established the responsibilities for the Competency Test Commission, the State Board of Education, the Department of Public Instruction, and local school districts. Accordingly, the Competency Test Commission recommends policies and procedures to the State Board of Education, which makes the final determination on these matters. The policies are implemented by the Department of Public Instruction with the cooperation of local school districts.

Within the Department of Public Instruction, the Assistant State Superintendent for Research and Development and the Division of Research, composed of a director and 21 staff members, are responsible for the administration of the competency testing program at the State level. At the local level, local school districts appoint a test coordinator who attends workshops given by State personnel on test administration and interpretation of results.

Approximate costs and funding sources. All of the funding for the State testing programs in North Carolina is appropriated from the State budget. This funding is for test development, administration, scoring and analysis, interpretation of test results, and remediation. Remediation monies are allocated in accordance with a weighted formula which allocates more funds to schools with students who have failed by a large margin, and therefore need more extensive remediation.

In 1978, the governor requested $8,700,000 for remediation alone, but the legislature appropriated only $4,450,000. However, the governor was able to redirect $3,300,000 to remediation. The remediation of high school juniors was set as the first priority for the use of this money. The second priority was the remediation of tenth-graders in order to prepare them for the competency test.

In the proposed biennial budget for 1980-82, $9,700,000 for the testing program was requested for the first year and $4,700,000 for the second year, in addition to the $7,750,000 annual appropriation. The General Assembly reduced these requests by $3,000,000 the first year and $1,000,000 the second year. The General Assembly was expected to pass the adjusted requests in addition to the $7,750,000 annual appropriation.

The initial request had allowed the monies to be used for grades 7-12. However with the adjustments made by the General Assembly, the Director of Remediation, who provided the information about the program funding but who is not directly involved in the testing component of the program, believes that the monies will probably not be used below ninth-grade level.

Program Evaluation

Although the legislation does not mandate program evaluation of any sort, the 1978-79 Competency Test Commission is studying the results of the testing program. The Commission will review and report to the State Board of Education the test results and results of remediation. The Commission also plans to explore the possibility of expanding the areas of competency to be tested.

Future Directions

The Competency Test Commission is responsible for making recommendations about the competency program as test results and remediation programs are reviewed. In order to generate information to help in decision making with respect to the competency program, the Department of Public Instruction projects that a series of studies will be conducted in the next year or two. Although still in the planning stage, the studies are expected to involve the following: (1) more extensive test analysis, with particular attention paid to item distractors; (2) additional attention to the setting of cutoff scores; (3) a review of remediation programs; (4) an analysis for the needs of exceptional children; (5) relating failure rates to school and socioeconomic factors; (6) a comparison of teacher judgments of student achievement and student test performance.

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CHARLOTTE-MECKLENBURG, NORTH CAROLINA

Development of the competency testing program in Charlotte-Mecklenburg began in 1975, two years before the mandated statewide minimum competency testing program. The first test was administered in 1977 and has been given twice a year since. The test consists of mathematics and reading sections and is administered to all tenth-grade students for diagnostic purposes and as preparation for the State competency test in the eleventh grade. Students must answer 65% of the test items correctly to pass, and students who fail receive remedial instruction. Some provisions are made for special populations, such as the exemption of learning disabled and handicapped students at the discretion of the high school principal, and assistance is given to some handicapped students during test administration.

Legislative and Policy History

Policy history. In August 1975 eight high school principals in the Charlotte-Mecklenburg School District decided to initiate measures which might give more validity to diplomas granted by their high schools. Their efforts focused mainly on the development of a competency testing program in the areas of reading and mathematics, although science and social studies were also considered as possible subjects for testing.

The group carried out a national survey of testing programs, reviewed information provided by the National Association of Secondary School Principals, and held numerous discussions with members of the community. The testing program which the group of principals developed for the Charlotte-Mecklenburg District was submitted to the Interim Management Team (a district-level group of four administrators who function in place of a superintendent) and accepted by the team for district implementation.

The district's competency testing program was field-tested first in the spring of 1977 in grades 9, 10, and 11. At first there was a possibility that passing the test might eventually become a requirement for high school graduation. When the North Carolina General Assembly ratified bill HB204 legislating the State High School Graduation and Competency Program in 1977, however, the district decided to administer its test in grade 10 to help prepare students for the State test and to diagnose student and program weaknesses.

Since the State competency program was state-developed and is being run uniformly throughout the State (See Minimum Competency Testing in the State of North Carolina, NES, 1979), this description will focus on testing activities that are unique to Charlotte-Mecklenburg.

Phase of implementation. The Charlotte-Mecklenburg competency test was administered first in November 1977 to all tenth-grade students in the district. It is currently given twice a year, in November and in May. The test was revised for the 1978-79 academic year (with a field test of new items in grades 9, 10, and 11 to eliminate any that showed bias) and the district intends to revise the test annually.

Associated litigation. Before the announcement of the district competency testing program, parent groups and the NAACP campaigned to convince the general public that the program was designed to identify basic skill deficiencies and provide remediation for all students and was not focused primarily on minority students. Thus far there has been no litigation challenging the district program.

Goals and Purposes

The original purposes of competency testing in the Charlotte-Mecklenburg school district were to: (1) give greater validity to the high school diploma, (2) diagnose skill difficulties, (3) encourage high schools to provide remedial learning opportunities for students not meeting competency requirements, and (4) make administrators, teachers, and students more accountable for basic skills development.

Competencies

Competencies covered by the district test are locally developed objectives in reading and mathematics. These objectives appear in Table 1 on the following pages.

The competencies were developed by district mathematics and English teachers. They reflect skills students are expected to possess by the end of grade 6.

TABLE 1

Charlotte-Mecklenburg Reading and Mathematics Skills

Reading

1) Translation (3 objectives)
2) Literal Comprehension (1 objective)
3) Interpretive Comprehension (8 objectives)
4) Study Skills (5 objectives)
5) Critical Comprehension (2 objectives)

Mathematics

1) Addition of Whole Numbers (3 objectives)
2) Subtraction of Whole Numbers (3 objectives)
3) Multiplication of Whole Numbers (3 objectives)
4) Division of Whole Numbers (3 objectives)
5) Addition of Common Fractions (4 objectives)
6) Subtraction of Common Fractions (4 objectives)
7) Multiplication of Common Fractions (5 objectives)
8) Division of Common Fractions (3 objectives)
9) Addition of Decimal Fractions (3 objectives)
10) Subtraction of Decimal Fractions (2 objectives)

TABLE 1 (continued)

Mathematics (continued)

11) Multiplication of Decimal Fractions (2 objectives)
12) Division of Decimal Fractions (3 objectives)
13) Percent (3 objectives)
14) Reading Graphs, Scales and Charts (3 objectives)
15) The Metric System (2 objectives)
16) Reading of Numerals from Words (2 objectives)
17) Money Management (9 objectives)
18) Geometric Shapes (3 objectives)
19) Time (5 objectives)

Standards and Standard Setting

Standards for the district test were set by consensus of local teachers. The passing score, or "acceptable level of achievement" as it is called by the district, is 65% in both reading and mathematics and is considered to be a score that would ensure mastery of a majority of the objectives.

Target Groups and Testing Schedule

The district competency test is given twice each year, in November and May, to all grade 10 students. The examination is given on two successive days. Half the students are tested in reading, the other half in mathematics on Day 1. On Day 2, the procedure is reversed.

Test Instruments

The district competency test, which closely parallels the State test, actually consists of two separate tests, one in reading and one in mathematics. Each test consists of approximately 60 multiple-choice items and uses eighth-grade vocabulary. One-third of the mathematics test consists of computation problems and the other two-thirds of application problems. Students record their responses on a machine-scorable answer sheet.

The tests were developed by local educators from the objectives presented above, and are evaluated and revised annually by curriculum specialists. New items are field-tested to eliminate sexual or racial bias.

Test Administration

The competency tests are administered to all grade 10 students on the same day and in the same manner as the mandatory State examinations so that the two programs will appear similar to both students and the public. It is hoped that this procedure will minimize controversy and improve student performance. Each school has a test coordinator who supervises the administration.

Tests are administered by either counselors or teachers with the assistance of one other school staff person. Tests are given in the homeroom, and each test requires approximately 55 minutes to complete, although testing periods are not timed. A student may take the test without parental permission. Absentees take the test the following week.

Since the test is administered for diagnostic purposes prior to the State examination, concern for test security is not as great now as it had been prior to implementation of the State program. Tests are numbered and stored in a central warehouse. Shortly before testing, they are delivered to the high school principals. On the day of testing, they are given to the guidance staff for distribution. Teachers are accountable for the return of each test booklet received.

Scoring and Analysis

Scoring and analysis are done at both the district and the individual school levels. The district machine-scores the tests to obtain raw scores for individual students and to calculate the percentage of students across the district passing the test. Individual schools are provided with scoring keys on which items are identified with specific objectives, so that the test results can be used for diagnostic purposes. Turnaround time for scoring is three days.

Reporting/Dissemination

Parents are informed of test results by means of a letter which indicates the student's raw score and the score required for passing. The press receives aggregate data giving the percentage of students passing and failing. Test scores become part of a student's permanent record.

Use and Implications of Test Results

Consequences to students. The Charlotte-Mecklenburg remediation program is linked to the State remedial allotment program. Local school districts receive funds in proportion to the percentage and severity of failures on the statewide tests. The district allotment for remediation is used to provide tutors and to establish community tutorial centers for students in depressed areas in and around Charlotte-Mecklenburg. Community contact persons from the tutorial centers, which operate after school hours, visit with students who have failed either the State or district competency test and with their parents. The contact persons try to encourage student attendance at the tutorial centers, which are beginning to teach test-taking skills in addition to providing remedial instruction.

Consequences to programs. So far instructional programs have been affected only minimally by the competency testing program. However, high school mathematics and language arts teachers are encouraged to give remedial assistance, and it is also recommended that each high school guidance department develop a follow-up program to help monitor student progress after the examination.

Provisions for Special Populations

All tenth-grade students are required to take the competency test; however, learning disabled and handicapped students, at the discretion of their high school principal, may be exempted from taking the examination. When appropriate, some handicapped children are assisted to take the tests. For instance, the tests are read to the blind.

Program Resources and Costs

General program staffing. The district minimum competency testing program is supervised by a Director of Assessment who works in coordination with district reading and mathematics resource staff. No further details with respect to program staffing are available

Approximate costs. Test reproduction costs $3-4,000 per year, and old tests are sold to other school districts for 27¢ a copy. Because the initial development of the tests was accomplished by teachers working during released time, program start-up costs were minimal.

Funding sources. Funding for the program comes generally from district revenues, although the State does provide money for some remediation services.

Program Evaluation

A test advisory committee of teachers and counselors reviews and revises test instruments annually, but no specific evaluation of the program as a whole is projected.

Future Directions

There is a possibility that similar competency tests will be developed for the eighth grade at some time in the future.

References

Haywood, S. A Report to the Charlotte-Mecklenburg Board of Education on the Competency Examination as a Graduation Requirement. 1977a.

North Carolina, Charlotte-Mecklenburg. The Competency Examinations as a Graduation Requirement. 1977b.

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ROCKY RIVER, OHIO

In the summer of 1976, the Rocky River (Ohio) Board of Education began to explore the issue of minimum competency testing, and the possibility of making the successful completion of such tests in reading, writing, and mathematics a requirement for high school graduation. Although the District had always stressed basic skills instruction, minimum competency testing was seen as a way to emphasize these skills.

A Steering Committee examined test instruments in 1976-77 and decided upon the Basic Skills Assessment (BSA) published by Educational Testing Service (ETS). The Committee recommended that the tests be administered to ninth-graders in November, and twice yearly thereafter until all sections of the test had been passed.

Legislative and Policy History

Policy history. Since Ohio has no statewide minimum competency testing program, local districts may make their own decisions about developing and implementing such programs. In the summer of 1976, because minimum competency testing was seen as a possible way to further emphasize the teaching and learning of basic skills, the Rocky River Board of Education mandated that schools in the district establish objectives in the basic skills. Specifically, schools were to focus on reading, mathematics, and writing with a view toward administering an annual test to assess student performance on these skills.

At the same time the Board also stipulated that the students must pass a half-year Life Competency Skills course in order to graduate from high school. Their decision was based on the results of a questionnaire survey of high school seniors and recent graduates; information from the survey was used in the design of the course.

After the decision had been made to explore the feasibility of competency testing, a Steering Committee of teachers, counselors, and administrators was appointed to examine available test instruments during the school year 1976-77. The Board had originally expressed an interest in developing its own instruments, but found the cost to be prohibitive. Therefore, the Steering Committee recommended the Basic Skills Assessment

Test published by Educational Testing Service. During the summer of 1977, the Board directed that this test be field-tested, and during the school year 1977-78, the eighth and twelfth grades were tested. Based upon the results of the field-testing in 1977-78, norms for high school entry and graduation were established; the class of 1982 will be the first class subject to the competency skill requirements for graduation.

Phase of implementation. Beginning with the class of 1982, graduating students must meet the following requirements in order to receive a high school diploma:

(1) Students must complete 18 units of credit to include the requirements set forth by the Ohio Revised Code and the Rocky River Board of Education;

(2) students must attain mastery of the basic skills of reading, mathematics, and writing, or for handicapped students, fulfillment of "reasonable expectation" in those skills;

(3) students must be recommended by the Superintendent;

(4) students must pass an 18-week Life Competency Skills course that may be taken anytime in grades 9-12.

Ninth-grade students are tested, with the first administration of the BSA taking place in the school year 1978-79.

Goals and Purposes

The primary objective of the competency testing program is to ensure that high school students have sufficient opportunity before graduation to master basic skills in reading, writing, and mathematics. The program is also intended to certify to the public that high school graduates possess life competency skills. The program will also provide a profile of student skill achievement.

Competencies

The areas selected for the basic skill requirements were reading, writing, mathematics, and life skills. Since the Basic Skills Assessment Test was chosen, the specific competencies measured are those upon which this test is based. The life competency skills taught in the half-year course focus on the areas of job planning, financial planning, family planning, and social issues. One general objective summarizes the intent of each area, which then comprises a number of specific objectives. Both the general and specific objectives within each of the four life competency areas are presented in Table 1.

Standards and Standard Setting

The passing standards for the Basic Skills Assessment test as it is administered in Rocky River were determined by comparing the average scores for eighth- and twelfth-graders taking the test and the cutoff scores that were derived using the Nedelsky and Angoff methods. Two committees were involved in setting the cutoff scores.

A steering committee of nine members comprising math and English subject specialists, guidance counselors, the coordinator of the learning resource center, administrators, and the chairperson of the competency program, applied the Nedelsky statistical method of establishing a minimum competency cutoff score to the field-test results. The second committee, the District Curriculum Advisory Committee, comprising parents, teachers, administrators, and one student, applied the Angoff method.

TABLE 1

Life Competency Skills and Objectives Taught in Rocky River's Life Comptency Skill Course

Job Planning: to investigate possible career choices and demonstrate how to apply for a job

1. relate abilities, values, needs, and experience to possible career choices;
2. demonstrate ability to locate, evaluate, and interpret information on careers by writing informative papers on two occupations;
3. name a minimum of five post-secondary educational and training institutions;
4. identify a minimum of three sources of information on two/four year colleges;
5. list and explain the sequential steps used in making career decisions;
6. identify future job opportunities in three career fields;
7. list at least five sources of job vacancy information and identify the distinguishing features of each;
8. demonstrate ability to write a letter of inquiry to three "Help Wanted" ads for which the student feels qualified;
9. demonstrate ability to fill out various forms associated with employment, such as a job application;
10. demonstrate ability to identify the components of a resume;
11. describe appropriate dress, appearance, and behavior for the job interview;
12. demonstrate ability to answer job interview questions in role-playing situations.

TABLE 1 (continued)

Financial Planning: to understand the effective use of money, money substitutes, and financial services

1. write three positive and three negative reasons for borrowing;
2. identify a minimum of three credit cards and differentiate between them as to interest charges and penalty clauses;
3. explain how a person obtains a credit rating;
4. construct a procedure for buying a home or automobile;
5. identify the correct placement of information on a short form income tax return;
6. identify the difference between gross, net, and disposable personal income;
7. identify a minimum of five ways inflation has affected a family of four living on an average income, and list at least five protective measures to minimize the burdens of inflation;
8. construct a monthly-yearly budget form including the proper placement of expenditure figures for necessities and secondary wants;
9. identify two advantages and two disadvantages concerning interest rates at commercial banks, savings and loan associations, and credit unions;
10. recite the meaning of two different kinds of checking accounts;
11. construct a checkbook balance form and properly place on it a series of deposits and expenditures;
12. identify at least five common errors made by writers of checks;
13. write the differences between a passbook savings account and a time deposit;

TABLE 1 (continued)

14. describe the difference between regular and compound interest;
15. write the differences between a regular and revolving charge account;
16. identify the differences between blue chip, growth, and risk companies;
17. recite the differences between common and preferred stock;
18. recite the differences between mortgage and debenture bonds, and between a triple A bond rating and a D bond rating;
19. write the definitions for the following terms: on margin buying, Dow Jones averages, stock split, selling short, bear and bull markets, speculator and investor, and dividend;
20. construct and explain the terminology found on the stock tables in the local newspapers;
21. list at least three ways to invest money other than in savings accounts or in stocks and bonds;
22. demonstrate how to compute yield and price-earnings ratio;
23. list five advantages and five disadvantages to buying or renting a home;
24. construct a check-list for comparing houses and apartments before renting or buying;
25. demonstrate how to compute property taxes.

TABLE 1 (continued)

Family Life: to be able to apply knowledge and judgment in considering parenthood and to carry out, responsibly, the role of parent

1. describe five characteristics of positive parental attitudes and home atmosphere;
2. identify at least three functions of the family;
3. describe the stages in the family life cycle and list three adjustments a person must make in each stage;
4. write three advantages and three disadvantages to sex-based roles;
5. identify five values unique to a minimum of three different life styles;
6. list five positive expectations to marriage and parenthood;
7. recite three reasons for the need to understand the different stages of a person's growth and development;
8. locate three appropriate reference sources regarding growth, development, and behavioral expectations for various age levels;
9. identify a minimum of three legal and moral responsibilities of parents;
10. describe a minimum of three ways in which to facilitate and enhance communications;
11. identify a minimum of three indications of stress and/or conflict, and state two constructive alternatives for resolving each situation;
12. draw a model for resolving conflict;
13. contrast the effects of positive versus negative methods of discipline;

TABLE 1 (continued)

Family Life (continued)

14. list and explain five constructive child-rearing techniques;
15. write a definition for the following terms: nuclear family, family in transition, egocentrism, developmental discipline, active listening.

Social Issues: to investigate and reach tentative decisions about social issues and to develop divergent thinking skills to illustrate that alternative solutions to social problems exist

1. list three different ways by which they may influence the progress, conditions, and forces operating in the world;
2. identify five current social issues and present two possible solutions to each of the identified issues;
3. identify three ways of interacting with people who hold differing opinions;
4. list five characteristics of three major value structures in our pluralistic local, national, and world societies:
    - religious
    - racial
    - ethnic background
    - political.

Results of the application of these two methods, along with the national scaled score averages and averages for Rocky River students, were as follows:

	Grade 8	Grade 12
National Average (ETS norm)	146	165
Rocky River Average	152	171
Angoff Procedure:	151 cutoff	
Nedelsky Procedure:	149 cutoff	

Given these results, the committees chose a standard independently for each subject area. The scaled cutoff scores--146 for reading, 147 for mathematics, and 147 for writing--were selected to be slightly lower than those generated by the Nedelsky and Angoff methods.

Target Groups and Testing Schedule

The BSA test is administered every November at the ninth-grade level, and twice yearly thereafter, in November and April. A student who fails a test in any of the subject areas may retake it at the regularly scheduled times until it is passed. Although the tests are untimed, each of the subject area tests is approximately one hour long and the tests are given on three consecutive days.

Students may take the Life Competency Skills course at any time during grades 11-12.

Test Instruments

The test used in assessing competency performance is the Basic Skills Assessment (BSA) published by Educational Testing Service (ETS). The school district also produces a writing sample test, but has not resolved the issue of what local standards to establish. The BSA is entirely multiple-choice and is reproduced each year in two new forms by ETS.

Test Administration

The BSA is administered in the high school by the guidance staff under the direction of the Director of Pupil Services each November and April. A makeup exam is administered in February for students with excused absences or for new students in the school district.

Scoring and Analysis

ETS machine-scores the results of the Basic Skills Assessment and analyzes the data both by individual and by district. Results are reported in terms of the number and percentage of students who:

- attained minimum academic expectations (MAE) on all three subtests
- did not attain MAE on one subtest
- did not attain MAE on two subtests
- did not attain MAE on three subtests
- did not attain MAE in reading
- did not attain MAE in writing
- did not attain MAE in mathematics

Reporting/Dissemination

The results of the test are mailed to parents eight weeks after examination. If a student has passed, a letter certifying completion of the graduation requirement is sent. If the student has failed, the areas in which the student failed are identified. The results of the examination become a part of the student's permanent record.

At the end of the year, a short summary report is produced for District use that details the number and percent of Rocky River students that have demonstrated mastery of each minimum competency subject area.

Use and Implication of Test Results

Consequences to students. An item-by-item test report is available from ETS for student diagnosis and remediation planning. A student who fails any of the three sections enters one of two groups depending upon the degree of failure. A student who is in the lowest quartile on the high school entry norms receives an Educational Plan for Intervention (EPI) for remediation. A student whose grade is above the lowest quartile does not receive an EPI unless that student fails again in grade 10. The EPI, which is revised several times to meet each student's needs, is developed by a team consisting of an administrator, counselor, and the Coordinator of the Learning Resource Center. Both the teacher and the student receive a copy of the EPI. However, parents can refuse to have their child attend a remedial program if they wish.

Consequences to programs. Students who fail the competency examination are offered remediation, but otherwise no specific program changes are required.

Provisions for Special Populations

Handicapped students are not automatically required to meet the competency requirements for graduation. However, most handicapped students do take the Basic Skills Assessment. The Special Education Placement Team reviews the progress of the handicapped students annually to determine what competency requirements are appropriate for these students. These revised requirements, as well as arrangements for assessing students, are incorporated into the student's EPI's. In the 1978-79 school year, 16 handicapped students in the ninth grade did not attain the minimum academic expectations.

Program Resources and Costs

General program staffing. The program is managed by the Assistant Superintendent of the Rocky River School District. Staff assistance is supplied by school teachers, and counselors, and the Coordinator of Learning Resource Services.

Approximate costs and funding sources. Start-up costs for the program amounted to $6,000 for the development of the Life Competency Skills course and of the remedial curriculum. This does not include the yearly expense of staffing these two programs. The tests and scoring for the first year, at $2.00 per pupil, cost $1,000. All funding comes from general school revenue.

Program Evaluation

No evaluation of the program has been conducted to date. The District does, however, expect to evaluate the program after the first three years of testing. Specific plans for this evaluation have not yet been made.

Future Directions

Because of scheduling problems, a teacher-made test is being developed to allow students to "test out" of the Life Competency Skills Course.

References

Ohio, Rocky River City School District. Minimum Academic Expectations: A Requirement for Graduation. 1978.

Ohio, Rocky River City School District. Summary Report: Minimum Academic Expectations - 1978/79 Testing. 1979.

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OREGON

Oregon's minimum standards program (adopted in June 1976) calls for the establishment of a system of goal-based instructional planning and evaluation on the part of all tax-supported school districts in the state. Local school boards are required to adopt local district goals which support the six statewide goals. In addition, for each of their instructional programs, local school districts must establish sets of program goals and course goals written in terms of expected student outcomes. Districts must assess periodically the extent to which students actually attain the defined outcomes, and initiate program improvement as necessary to ensure student achievement of the stated goals. Thus, the State establishes only broad goals, and the local districts are responsible for developing specific instructional goals and programs and for assessing their effectiveness.

The State requires districts to set goals in two broad areas. The first area relates to such life-oriented needs as individual growth and development, the development of skills necessary for life-long learning, and career development. The second revolves around the development of competence in more traditional areas such as writing, reading, and computing. The minimum standards have been in effect for three years. As yet no comprehensive evaluation of the program is available, although the University of Oregon has been asked to conduct a study directed at the graduation requirements, instructional planning that has occurred, and the competencies.

Legislative and Policy History

According to Oregon State law (ORS 326.051), the State Board of Education must establish State standards for public schools in light of the goals of modern education and the requirements for a sound comprehensive curriculum. The law requires the Board to adopt rules for the general governance of the schools and to prescribe minimum or required courses of study. The "standards" mandated are legal requirements intended to ensure that all Oregon students have access to a sound, comprehensive curriculum and to qualify local districts for State support.

In June 1968, the Oregon Department of Education, to aid the Board in establishing such statewide standards for education, undertook an analysis of educational needs. As part of this analysis, the Department took measures to learn the public's views of the school system and of its deficiencies. At a series of town meetings called by the Superintendent and the Board, it was clear that there was widespread public sentiment in favor of making the schools accountable for teaching certain skills and for setting minimum standards for these skills. As a result, the State Board required that all school systems must measure learner outcomes in order to qualify for State funding.

At the same time (between 1969 and 1970), the Superintendent requested a subcommittee of the Oregon Association of Secondary School Principals to examine high school graduation requirements. The first draft of a proposal for high school graduation requirements was presented to the State Board at a public hearing on September 29, 1971. Many groups (e.g., the Oregon Association of School Administrators, Parent-Teacher Associations) from all over the state participated in the discussion of these requirements. Finally, the Board of Education approved a fourth and final draft in September 1972 with an implementation date set for no later than the graduating class of 1978. This final draft left the decision on the nature of specific competency requirements for graduation in the hands of local school districts. Statewide goals were established, however, to ensure that all students in the elementary and secondary schools will receive the opportunity to learn to function in the six life roles of individual, learner, producer, citizen, consumer, and family member.

These graduation requirements were included within the larger scope of the Minimum Standards for Public Schools, the revised version of which was formally adopted by the State Board of Education in December, 1974. Thus the final policy set a statewide requirement for minimum competency verification in reading, writing, computational, speaking, and listening skills; verification of skills in personal development, social responsibility, and career development (so-called life-oriented skills) was left to local option. A revised version of the policy was adopted in June 1976.

Phase of implementation. Each local district with students in grades 9-12 must implement the competency component of its graduation requirement as follows:

(1) Local districts must certify, as of the class of 1978, that all graduating students have met the minimum competency standards in reading, writing, speaking, listening, and computing.

(2) Graduating students must meet the minimum standards in competencies (including those in personal development, social responsibility, and career development) as of the class of 1981.

Goals and Purposes

General goals. According to the Department of Education, students in the Oregon system should have the opportunity to receive an education that will help them:

(1) develop the skills necessary for life-long learning;
(2) develop the skills necessary to become self-directed individuals;
(3) make appropriate career choices;
(4) act responsibly as citizens of state, nation, and world;
(5) become intelligent, responsible consumers;
(6) learn the rights and responsibilities of family members, and acquire the skills and knowledge to strengthen and enjoy family life.

Specific purposes. Students must fulfill performance requirements in the following areas: reading, writing, speaking, listening, and computing. A student must be able to use basic scientific and technological processes; must know how to develop and maintain a healthy mind and body; must be an informed citizen in the community, state, and nation, in interactions with the environment, on streets and highways; must be an informed consumer; must be able to function within an occupation or continue education leading to a degree.

Competencies

The State Board mandated the broad competency areas to be assessed for graduation--reading, writing, listening, speaking, computing, personal development, social responsibility, and career development--but it left the definition of performance indicators within each area to the local school districts. During the development of these minimum "standards," however, the State was sensitive to the potential problems that local districts might face in their implementation of the policy. At the State's initiative, then, groups of parents, teachers, and administrators met as independent committees to consider problems of implementation. Of special concern to one committee was the certification of competencies for graduating students. The following were among the observations made:

(1) Carefully developed competency and performance indicator statements can provide a sound basis for reasonably objective assessment measures.

(2) There are no adequate measures in many instances, and the cost of their development is likely to be beyond the resources of many schools.

(3) Many schools plan to use teacher judgments in determining competency attainment.

(4) The considered judgment of teachers is critical to the proper conduct of schooling.

(5) The emerging competency and performance indicator lists being prepared by the schools are a source of justifiable concern about the potential costs of record keeping.

Therefore, it seemed clear that State goals had to somehow be brought into alignment with locally implemented procedures, and that teachers' assessment capabilities were a rich resource that should be fully utilized.

In order to facilitate this approach, the State prepared booklets to help teachers specify competencies and performance characteristics, gather performance information, and develop standards for making judgments. The booklet entitled Measuring Performance: Verifying Competencies through Observation and Judgment, for example, warns teachers of the need for appropriate care in developing "standards," and goes on to discuss and define the properties which promote a "standard's" validity.

Standards and Standard Setting

While the State calls its policy for minimum competency testing a policy of "minimum standards" for graduation, it does not, in fact, set standards in the sense of levels of performance required for graduation. The State does not, in other words, mandate that students must score a particular percent correct on competency tests in order to graduate or that they achieve a certain number of objectives out of a total. All standard setting occurs strictly on the local level; it is up to the local school districts only to ascertain for the State that their students have achieved "minimum standards" for graduation. As to how local districts may decide to set standards, the Director of the Center for Program Coordination for the Oregon Department of Education believes that most local districts simply have teachers or the administrators set the standards. A few school districts are known to pilot-test the measurement instruments in order to set standards.

Target Groups and Testing Schedule

The State Board only insists that competency be verified at the high school level. Each local district can decide for itself whether or not to test children at earlier levels.

Local districts must certify that graduating students have met all competency requirements, as of the class of 1981, but test scheduling and selection for this purpose remain local responsibilities.

The State does conduct a statewide basic skills assessment program in reading, writing, and computing skills at grades 4, 7, and 11. The State develops the test instruments, assesses a sample of students around the state, and provides data on a statewide basis. They also offer local districts the option of giving the tests to more students. The testing was first done in 1977-78, and is expected to be repeated in 1979-80.

Some groups hold the view that high school may be too late to begin competency testing, and one local district in Oregon conducts its competency tests in grades 7 and 8. The Oregon Education Association has taken the position that competency testing should begin in the elementary schools.

In fact, revisions of the standards under consideration by the State Board suggest that local districts establish achievement levels in the basic skills for each elementary grade; again, each local district must decide how this should be done. Some local districts are now planning to start minimum competency testing in grades 1-6.

Test Instruments

What verification or measurement instruments to use and how to acquire them are decisions made entirely at the local level. The State does offer local districts the option of using the State tests developed for statewide assessment. The State hopes to develop a bank of test items, to be calibrated on a Rasch scale, which local districts can use to assess the basic skills in areas such as writing, reading, and computing. However, this is not a formally funded project, but rather something that may result from monies spent on consortium work.

In order to help local school districts select or develop appropriate measures, the State offers technical assistance in the form of workshops, resource booklets, and consultant advice. The State also encourages local districts to form consortiums, thereby pooling resources and collectively tackling problems of instrument development, and to utilize services offered by educational service districts (ESDs). The ESDs are governmental agencies which are equipped to provide such services as competency or verification instrument development, scoring, and analysis of results to individual school districts or consortiums. The ESDs also provide such routine services as audiovisual instructional support.

Test Administration; Scoring and Analysis; Reporting and Dissemination

All test administration, scoring, analysis, reporting, and dissemination are done at the local level by teachers and administrators. Since the State requires local districts to make their own decisions about these activities and has established no formal monitoring procedures, it has no formal record of what the local districts do.

Use and Implications of Test Results

Consequences to students. No student can graduate unless he/she fulfills the competencies specified by the local districts. These competencies must in turn meet the criteria established by the State.

The Board ruling further states says that by September 1, 1979 local districts must adopt procedures to:

(1) identify individuals' learning strengths and weaknesses;

(2) provide learning opportunities for students in response to their needs;

(3) determine the progress which students make in their educational program;

(4) maintain student progress records and report the information to parents and students.

According to the Director of the Center for Program Coordination in the Oregon Department of Education, local districts have interpreted this Board ruling differently depending upon their orientation to competency verification. Some, which test as early as junior high, have specifically utilized verification results to help them identify student problems and plan appropriate instruction. In these districts, students who do not pass the assessment are placed in special remedial classrooms. In other districts, competency verification is not always seen as having beneficial effects on students or instructional programs.

One teacher described the effects upon the students as follows: "Kids are universally aware the damn things are silly. They've come to the point where they're going through the motions like everyone else. I am, they are, and the administrators are." In this same school district, however, some parents have reported that slow students have received more help, and the district did expand its remedial reading staff.

The State, according to the Director of the Center for Program Coordination, has been trying to encourage other districts to look at the developmental sequence of instruction at the junior high level in order to provide early remediation. But one Oregon eighth-grader raised a troubling question: "Why do you need to study your brains out for a competency you're just going to forget when you get older?"

Consequences to programs. According to Board policy, each local school district must adopt and implement a system of instructional programs, planning, and assessment to provide: sets of goals that include program goals that will contribute to achievement of district goals and course goals; needs identification for reading, writing, and computing in programs in order to set priorities for addressing these needs; policies and procedures for making program improvements in assessment programs in the areas of reading, writing, and computing.

Provisions for Special Populations

The State Board of Education, in its revised standards adopted in 1976, permits the local district to alter performance requirements for competencies, or to adopt a policy for granting waivers in order to substitute competencies which are appropriate to unique needs and abilities of an individual student. In other words, local districts have the leeway to alter requirements for special needs, however they may be defined.

Evaluating the previous educational experiences of transfer students has always presented problems, but the new requirements make the problems more difficult to solve because of the wide variation in the competency verification systems developed by the different local school districts. The problems are particularly acute if one school sets competencies of the "school skills" variety, and the other sets competencies of the "life skills" variety. According to the Director of the Center for Program Coordination of the Oregon Department of Education, this remains an unresolved issue which is still being debated.

Program Resources and Costs

General program staffing. In Oregon, the main drive for minimum standards, particularly for the life-oriented standards has come from the State Superintendent's office and the State Board of Education in general. Considerable support for helping local districts develop their testing plans has come from the State Superintendent of Public Instruction. Also, the State has encouraged consortiums of local districts to work together. Local program staffing is handled entirely by the local public school districts.

Approximate costs. Since most of the responsibility for program development and administration lies with the local districts, cost figures vary from district to district. One district estimates that its program costs about $10 a student for records and testing, for a total of approximately $42,000 a year. In another district, the officials would not estimate what their plan costs, but called it "a tremendous expenditure, much more than we ever should have spent."

The statewide assessment in 1977-78 cost approximately $175,000.

Funding sources. Funding for the State's technical assistance (workshops, resource pamphlets, and consultants) for the basic skills program comes from the State budget.

Program Evaluation

The State Board's revised standards do not require a systematic evaluation of the program. The result is that no data exist other than informal statements from students, parents, and educators. The Director of the Center for Program Coordination points out that initial lists of competencies were far too long and have been revised considerably. Although there is still considerable disagreement over the value of establishing minimum competency standards, the Director of Evaluation adds that the debate over minimum competency has stimulated the entire school community to discussion of the nature and purposes of public education.

The University of Oregon has been commissioned by the State to conduct a study of the effects of the minimum competency program. The study is being funded by the State Department of Education and is directed specifically at graduation requirements, ongoing instructional planning that is resulting from the program, and the program competencies. An opinion survey instrument has been distributed to school administrators around the state, and results are expected to be compiled in the fall of 1979.

Future Directions

In the opinion of the Director of the Center for Program Coordination it is difficult to make any predictions about future directions which Oregon's minimum competency program might take. He notes that on the one hand, many administrators, formerly opposed, now advocate that the State Department of Education develop a uniform list of competencies for statewide adoption. On the other hand, the Director observes, there is also a great deal of opposition in other quarters to any action which might weaken the principle of local control. The State Board of Education is committed to the concept of local control, and has rejected the notion of using State cutoff scores for a statewide standard of competency for graduation. The Board, along with most elementary and junior high school teachers, seems to view the development of basic skills as a primary responsibility of the local district, and seems to favor keeping judgments about student competency as close to the classroom as possible.

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PARKROSE SCHOOL DISTRICT, PORTLAND, OREGON

In response to the requirements mandated by Oregon's minimum standards program, which was adopted in its revised form in 1976, the Parkrose School District has developed and implemented a system of goal-based planning and evaluation. As required, the Parkrose system is based on the six goals mandated by the State, but this is only a small part of the entire Parkrose program. The district has evaluated and reorganized its curriculum in 15 different areas, from kindergarten through twelfth grade; it has established a set of 89 competencies across the 15 areas which are tied to graduation requirements, and has implemented a comprehensive program of assessment and reporting of performance of these 89 competencies.

Unlike many other minimum competency programs, many of the Parkrose District's graduation requirements may be satisfied by the end of junior high school (grade 9). Students are tested on many of the course goals in grades 3 and 6 as part of an instructional and assessment program designed to lead up to and culminate with the grade 9 competency testing. Others of the 89 competencies can be assessed through course work and need not be evaluated through testing. To date, Parkrose has developed and implemented its own extensive testing program to measure satisfactory levels of student achievement in reading, writing, and computing. According to district staff, parents, administrators, and faculty of the Parkrose District are confident of the future of their minimum competency program and believe it has had a favorable effect on curriculum planning and instruction.

Legislative and Policy History

Policy history. In June 1968 the Oregon Department of Education initiated a needs assessment analysis to find out what the general public perceived as deficiencies in the school system. The Superintendent and the State Board conducted a series of town meetings in which teachers, parents, and administrators participated. The investigation resulted in the State Board mandate of December 1974 which established statewide educational goals. The local districts were directed to develop specific objectives compatible with the State goals and to assess student progress in achieving their objectives. (See Minimum Competency Testing in the State of Oregon, NES, 1979.)

Oregon's minimum standards program, which was adopted in its revised form in 1976, requires every tax-supported school district in the State to establish a system of goal-based instructional planning and evaluation. The local program must support the six statewide goals which are designed to ensure that every student is given the opportunity to learn to function as an individual, learner, producer, citizen, consumer, and family member. In addition, the local school district must establish program goals and course goals expressed in terms of expected student outcomes; it must assess student performance in relation to these outcomes; and it must evaluate its goal-based program periodically. Thus, the final policy set a statewide requirement for minimum competency verification in reading, writing, computational, speaking, and listening skills; verification of skills in personal development, social responsibility, and career development (so-called life-oriented skills) was left to local option.

Phase of implementation. The State mandate requires every school district with students in grades 9-12 to implement the competency component of its graduation requirement as follows:

(1) Local districts must certify attainment of competencies necessary to read, write, speak, listen, and compute beginning with the class of 1978.

(2) Attainment of all competencies must be certified no later than the graduating class of 1981.

The mandate states that students must master basic skills by the end of the junior year. However, the State puts no consequences on failure to master the basic skills.

Goals and Purposes

The Parkrose School District's major goals are to: "define its instructional programs in terms of expected learner outcomes, assess the effectiveness of its program in meeting goals in reading, writing, and computing, and report its success (or failure) in meeting goals in these three areas to the community" (Parkrose, 1978a, p.1). Specifically, the purposes of the Parkrose program are to implement its revised, goal-based instructional plan in 15 curriculum areas, grades K-12, and to continue to administer and improve its assessment program in reading, writing, and computing. Its competencies involve basic skills that students would be expected to have mastered by the end of grade 9. Many of the competencies have been chosen specifically to meet the State's requirements, so that the District can concentrate on monitoring progress in acquiring the essential basic skills throughout a student's school career. The State requires that students be monitored in reading, writing, and computing.

Competencies

The State Board mandated the three competency areas to be assessed for graduation--personal development (including reading, writing, listening, speaking, and computing), social responsibility (including citizenship), and career development (including career exploration and work-related skills)--but the local school districts were responsible for defining the specific performance indicators within each area. In response to the State's mandate, the Parkrose School District defined and implemented a comprehensive goal-based program of instruction and evaluation covering all areas of the K-12 curriculum, including such areas as fine arts and performance arts.

From its inception in 1972, the Parkrose assessment effort has been much more comprehensive than that mandated by the State; the required minimum competency testing is only one part of the Parkrose program. In accordance with the State's requirements, however, the Parkrose District has developed assessment instruments in reading, writing, and computing.

From the beginning, committees of teachers, parents, and administrators have been involved in the developmental process. The first step undertaken was to set program goals in every curriculum area. A group of teachers and specialists from each subject area then developed actual course goals, competencies required for graduation, and performance objectives. A total of 89 competencies were defined across all of the competency areas. Subject area specialists and teachers then developed test items, matched to specific competencies.

The Parkrose program is unique in that it is designed to have students demonstrate satisfactory levels of achievement while in junior high school, i.e., grades 7-9. The emphasis of the Parkrose program is on a mix of basic "school" skills (reading, writing, and computing and life skills). Competencies are defined for both and life skills are emphasized in high school course work. Other Oregon school districts, such as Salem, have chosen to emphasize mostly life skills. As stated earlier, the option of verifying completion of competencies in the life skills areas was left to local school districts.

The Parkrose District has developed curriculum guides in 15 different areas for the elementary (K-3), intermediate (4-6), and secondary (7-12) levels which define the content and sequential order of the program's goals and competencies. These guides are used by teachers in the instructional process, and the district plans major revisions of the guides at least every five years. Some updating is done yearly.

General goals for each competency area (referenced to grade levels) and specific competencies related to these goals are presented in Table 1.

Standards and Standard Setting

Standards are set by each local district in Oregon. In Parkrose, developmental teams consisting of teachers and administrators have been primarily responsible for the establishment of standards. An ongoing committee reevaluates materials and standards in each curriculum area at least every five years. The district communicates with parents by holding citizen advisory committee meetings once a month. There is a Citizens' Advisory Committee for the district and one for each school building. Much of the decision-making in the district is focused at the school building level.

Mathematics. The District first administered the mathematics competency test to the class of 1977. The test was 90 items long, took 90 minutes to complete, and required two sittings (one per subtest). However, only 34% of the 400 students first tested passed the exams. After an examination of the field-test data, some skills of higher and lower order were deleted from the test; test length remained at 90 items.

The mathematics test now consists of three subtests: (a) computational skills, problem solving; (b) mental arithmetic; and (c) measurement, ordering, relationships. In order to pass the test, the student must score 80% on the total test and 80% on each of the goal areas. Students who fail any part of the test may retake that part only.

Reading. All seventh-grade students, and those eighth- and ninth-graders who have not met the performance standard required, must take a reading test that is referenced to the district's goals. This test is geared to the mid-eighth-grade level, consists of 30 items keyed to six goals, and has a passing score of 80%.

TABLE 1

Parkrose Requirements in Reading, Writing and Computing

READING

General Goal:	The student comprehends the printed materials needed to succeed in his/her educational, vocational, social, and personal interests and inquiries.
Grade 3:	(1) Word Attack Skills (2) Vocabulary Development Skills (3) Comprehension Skills
Grade 5:	(1) Vocabulary Development Skills (2) Comprehension Skills
Grades 7-9:	(1) Comprehension Skills

WRITING

General Goal:	The student writes honestly, creatively, and clearly, adapting his/her writing to different purposes, audiences and communications forms, using the mechanics and conventions of writing appropriately to assure accuracy and clarity in commmunication.
Grade 4:	(1) Writing Conventions (2) Grammar (3) Organization (4) Mechanics

TABLE 1 (continued)

Grade 7:	(1) Writing Conventions (2) Grammar (3) Organization (4) Mechanics
Grade 9:	(1) Writing Conventions (2) Writing Exercises (3) Usage
MATHEMATICS	
General Goals:	(1) The student knows and is able to use the symbols, elements, operations, and structures of the following: whole numbers, integers, rational numbers, real numbers, complex numbers, and other number systems, both finite and infinite. (2) The student recalls basic facts, knows common equivalencies, and is able mentally to make reasonable estimates and perform simple operations. (3) The student knows and is able to apply measuring skills. (4) The student is able to use the language of mathematics, apply ordering skills, make comparisons, and use the mathematics of probability and statistics. (5) The student is able to use mathematical relationships, including the presentation and interpretation of data.

TABLE 1 (continued)

(6) The student is able to use mathematical symbols, systems, and operations in the solution of quantitative problems (applications).

(7) The student knows and is able to apply logical arguments.

(8) The student knows and is able to apply the properties of geometric figures and relationships.

(9) The student is able to select and use support technology such as calculators and computers.

(10) The student appreciates the value and structure of mathematics and its relationships with other disciplines.

Grade 3:

(1) Addition/Subtraction, Basic Facts
(2) Multiplication, Basic Facts
(3) Comparing/Ordering
(4) Problem Solving
(5) Addition/Subtraction Concepts
(6) Addition, with and without regrouping
(7) Subtraction, with and without regrouping

Grade 6:

(1) Whole Number Operations
(2) Decimal Fraction Operations
(3) Operations with Fractions
(4) Whole Number Concepts
(5) Decimal Concepts
(6) Common Fraction Concepts

Grades 7-9:

(1) Computational Skills
(2) Mental Arithmetic
(3) Measurement
(4) Comparing, Ordering
(5) Relationships

Writing. Since writing is assessed for different purposes at different grade levels, standards are not always set. In grades 4 and 7, for the purpose of program evaluation, students are administered a test assessing the writing goals and are also assessed on two written samples. Essays are scored holistically on a scale of 1-4 by each of two teachers, and then the scores are added together. While there is no pass or fail, a score of 2 or 3 indicates a very low level of competency; a score of 4 or 5 indicates marginal competency, a score of 6 is tending toward competency and 7 or 8 indicates highly competent.

With regard to graduation requirements, some students in grade 8 and the remainder in grade 9 are required to achieve an 80% passing score on the punctuation/capitalization test and a 90% passing score on the spelling test. These students are also required to write four paragraphs; three out of the four paragraphs must satisfy specific, previously defined criteria. The paragraphs are therefore scored on the basis of these criteria.

In grades 10 and 11, writing samples are again collected for the purpose of program evaluation and, as in grades 4 and 7, scored holistically and on a similar scale.

Target Groups and Testing Schedule

In order to meet the State's mandated requirements, Parkrose has implemented, or will complete the implementation of by September 1979, the periodic assessments described below.

Mathematics. An arithmetic test referenced to district goals has been administered to third- and sixth-graders for the past five years. In addition, sixth-graders of demonstrated excellence may take the computational section of the graduation requirement level tests. Mathematics graduation competency tests are administered to all seventh-grade students and to eighth- and ninth-grade students who have not met the performance standards.

Reading. Tests referenced to district goals were administered to third-grade students for the first time and to fifth-grade students for the second time in the spring of 1979. A reading competency test referenced to district goals at the mid-eighth-grade level is administered to all seventh-grade students and to eighth- and ninth-grade students who have not met the performance standard for graduation. In 1979 the district administered this test for the fifth year. A reading test for grade 11 was given for the first time in the spring of 1979.

Writing. The district's punctuation/capitalization and spelling tests are administered to some eighth- and all ninth-grade students. At the ninth-grade level, each student also takes a writing exercise test which is scored according to established criteria by classroom teachers under direct supervision of the Department.

In summary, the program of assessment in reading, writing and computing, by 9/1/79, will be administered as follows:

Program Area	Grade Levels
Reading	3, 5, 7-9*, 11
Writing	3, 6, 8-9*, 11
Computing	3, 6, 7-9*

*Indicates graduation requirement for competencies level.

In addition to these required administrations of the district goal-referenced test leading up to graduation (grade 9), Parkrose also administers District Goal-Referenced Tests for advanced students in mathematics in grades 10-12. Also, Parkrose administers a standard achievement tests in grades 4, 7, and 10 in order to obtain comparative data regarding the achievement of students in Parkrose to that of other groups of students. The tests in grades 4 and 7 are normed for the Portland Metropolitan Area. Grade 10 is administered the California Achievement Test.

Test Instruments

The decisions as to what measurement instruments are used to satisfy the state-mandated requirements and how to acquire these instruments are left entirely to the local district. However, the State offers local districts the option to use tests which were developed as part of a statewide assessment in reading, writing, and computing. In addition to the tests, the State provides technical assistance to help local districts select or develop appropriate measurement instruments. This assistance is provided through workshops, resource guides, and consultation with specialists.

Parkrose chose to develop its own instruments referenced to the district's goals, which encompass the state-mandated goals. As described earlier, these tests are developed by a subcommittee of teachers and administrators, with advisory input from a committee of parents and citizens. Also, as a member of the Northwest Evaluation Association, the district can and does draw upon test items provided in the Association's item collection; and the district reciprocates by submitting its own items to the collection.

The Parkrose District develops a new test in reading, writing, and computing for each administration. This is done by drawing from the item collection items which have already been field-tested. For example, Parkrose has a collection of 600 items in mathematics (100 per goal area), which were developed by Parkrose teachers and area specialists. Items and test directions are typed on index cards which are stored by objective. A complete battery of nine tests can be constructed in two hours by selecting items, placing the index cards in acetate folders, copying them, and typing item sequence numbers on the copied pages. Many test item cards include a Rasch item estimate expressed in RITs. Parallel test forms are constructed on the basis of this RIT value.

Generally, the mathematics test is constructed to comprise 5 items for each goal area assessed in a given administration; a rule that is followed, however, is that the test never contains fewer than 20 items. Therefore, if a student is being retested on only one goal area, there will still be 20 items on the test. Thirty items assessing six goals comprise the reading test. The punctuation/capitalization section of the writing test consists of 40 items, 20 in each area, and the spelling test consists of 20 words selected from the Dale word list compiled by the Oregon State Department of Education.

In addition to the district's Goal-Referenced Tests in reading, writing and computing, which are criterion-referenced tests, Parkrose also administers normative-referenced tests in grades 4, 7, and 10. All response modes in these three areas are of a multiple-choice format except in writing, which includes open-ended writing exercises, or essay tests. The writing tests are developed at Parkrose and are not norm-referenced.

Across the 15 curriculum areas incorporated into the district's goal-based program, however, not all of the 89 competencies are measured by tests of the multiple-choice or open-based type. Some of the competencies can be satisfied by course work; others may be evaluated through observational items, particularly verification checklists completed by local teachers.

Test Administration

All testing is done in the school building by local testing coordinators; students are tested in a room separate from their usual classroom, and their teachers are not present in the room during the test.

The 90-minute mathematics test is given in two sittings and may be administered at any time when the student is ready. Reading and writing tests are given only at specified times. Initially, the flexible testing in mathematics caused security problems, but now, with its 600-item bank, the district can assemble new but parallel test forms in a short period of time.

Scoring and Analysis

Most of the scoring, reporting, and record keeping in Parkrose has been done manually at the evaluation office. Results are returned to the students within 24 hours.

The district is, however, moving quickly toward computer support for the program. Currently, the district uses a scan-tron test scoring machine wherever possible, but the scores by goal area must be computed by hand. Actual student responses from answer sheets or test booklets are keypunched and entered into the computer for item analysis and Rasch calibrations. The Rasch technique is the primary tool used in item analysis; support for the use of the two methods is provided by the Northwest Evaluation Association and the local Educational Service Districts.

Parkrose now uses the computer facility for the Educational Services District (ESD), a governmental agency equipped to provide support for instructional and assessment programs. Student records of competencies completed have been kept manually in the past, but are now being entered into the ESD computer. Terminals to the computer are being installed in each school building. Eventually, the school district plans to purchase the additional equipment required to enable the scan-tron to read the response sheets directly into the computer and have the student's passing score recorded directly on the student's competency record.

Reporting/Dissemination

In order to meet the spirit and the intent of the State's mandated requirements, the district's reporting mechanisms are designed to report to the community the degree of the program's success (or failure) in meeting the specified goals. All record keeping and reporting is done by the evaluation office, which publishes a Report of Program Assessment each year as a public document. Data compiled for each school and for the district as a whole are included in the report, including information related to comparisons of the schools within the district and longitudinal data comparing test results for the schools over the past few years. At the end of grade 9, each student's parents receive a report on the student's status in relation to the number of graduation competencies thus far completed. Through its documents and reports, its once-monthly interaction with the Citizens' Advisory Committee, and its local public meetings, the district makes an attempt to disseminate information about the assessment program as widely as possible.

Use and Implications of Test Results

Consequences to students. Advancement from grade to grade does not depend upon test results, although the district hopes that students will have achieved competency in the basic skills prior to their entrance into high schools. Junior high students who are deficient in the basic skills to the degree that it would hinder their progress in regular high school classes are assigned to competency laboratories when they enter high school.

If a senior high school student has not met one or two competency requirements, alternate requirements are established at a meeting of teachers, students, and parents. Very few students are denied diplomas as a result of the competency testing; those who fail to graduate usually fail to pass the course credit requirements. In 1978 only one student in a graduating class of 370 failed to meet the graduation competency requirements.

Consequences to programs. Every curriculum area has redesigned its K-12 program. Curriculum guides for all subject areas are being prepared in accordance with the newly defined goals. Formal remediation for students who fail the competency tests occurs through a restructuring of the students' instructional plans to focus on the competencies missed. Competency labs have been established for this purpose for students who need remedial work, but no extra funds have been allocated to this aspect of the program. While not specifically related to the testing program, a Gifted Students Program has also been established.

Provisions for Special Populations

The State guidelines allow the local districts to alter competency performance requirements for special populations or to waive testing requirements entirely for individual students. Emotionally disturbed children in Parkrose do take the competency test. For the Asiatic group in the community, and Parkrose has a large population of Asiatics who are mostly refugees; an itinerant teacher gives students instruction in their first language, until they can function in English.

Program Resources and Costs

General program staffing. Teachers work in close collaboration with the Evaluation Office, which employs one professional, the Director, and one part-time clerical person. This office, which was established in 1973, had a first year operating budget of $10,000 to pay for both supplies and summer salaries of teachers assisting in the developmental aspects of the program. Generally, the work of developing goals, curriculum guides, and test items has been done by teachers.

Approximate costs and funding sources. The Director of the Parkrose Evaluation Office estimates that the program costs about $12 per student for records and testing, which is roughly $46,000 a year. An estimated $5 of the $12 is used directly for minimum competency graduation requirements. These funds come from the local school district budget. State support is limited to resource materials, workshops, and guidance.

Program Evaluation

That the Parkrose minimum competency program has been successful is substantiated by the following:

(1) In general, the district had declining standardized test scores until 1974, and improved standardized test scores since 1974.

(2) The percentage of students meeting the program goals has increased each year (it should be noted, however, that some of the goal statements and test items are updated each year). This is especially impressive in light of the fact that any change made on these tests has been designed to increase the difficulty level.

(3) In 1975 only 50% of the sixth-graders passed the tests in whole number operations; now, better than 90% pass the tests referenced to these operations.

Teachers in the district believe that the evaluation program has had a positive effect upon student achievement.

Future Directions

The Director of Evaluation hopes to:

(1) use the assessment data to modify the curriculum and discover better teaching techniques;

(2) build item banks in conjunction with other school districts to reduce the cost of test development;

(3) improve the efficiency of assessment;

(4) use the computer for scoring and reporting;

(5) find better ways to manage student learning;

(6) decrease the amount of teacher record keeping.

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SALEM SCHOOL DISTRICT, SALEM, OREGON

In December 1974, the Oregon State Board of Education mandated Minimum Standards for the Public Schools. The mandate calls for minimum standards to be set in reading, writing, computation, speaking, and listening skills. The Board also established statewide goals so that every Oregon student will have the opportunity to learn to function effectively in the six life roles of individual, learner, producer, citizen, consumer, and family member. Each local district with students in grades 9-12, is to implement the competency component of its graduation requirement as follows:

(1) Local districts must certify attainment of competencies necessary to read, write, speak, analyze, and compute beginning with the class of 1978.

(2) Attainment of all competencies must be certified no later than with the graduating class of 1981.

The mandate states that students must master basic skills by the end of the junior year. However, the State puts no consequence on failure to master the basic skills.

The life/survival skills are tied to graduation; in order to graduate, students must pass specific competencies developed at the local level in accordance with the State goals.

The Salem school district has five high schools and 22,000 students in grades 1-12. There are two district testing programs used to meet the state mandates. The first is the Competency Performance Indicator Test (CPI), a test based on 35 survival and life-skill competencies. The second is the Minimum Skills Objective Test (MSO), into which most of the district's testing efforts are channeled. These two programs are entirely independent of each other. The district is solely responsible for the development, administration, scoring, and setting of standards for these tests.

Legislative and Policy History

Policy history. In June 1968, the Oregon Department of Education initiated a needs assessment analysis to find out what the general public perceived as deficiencies in the Oregon school system. One result of this study was that the Board required every school district to measure learner outcomes. An extended series of town meetings followed, run by the Superintendent and the Board, involving teachers, parents, and administrators. The process resulted in a December 1974 mandate from the Board establishing goals in the area of minimum competencies. The districts were to develop specific objectives compatible with the State goals, and to measure students' attainment of these goals.

Salem selected primarily survival and life-skills competencies as the focus of its program, as opposed to other districts (such as Parkrose) which selected basic skills-oriented competencies. These competencies gave rise to Salem's CPI tests.

Phase of implementation. In 1976 the Oregon Board of Education revised the mandate to require that high school students pass life skill competencies in order to graduate. The specific competencies were to be set by the local school district. The class of 1980 will be the first class required to pass these competencies prior to graduation. The mandate, which stipulated that students must master basic skills by the end of the junior year, initiated the development of Salem's MSO test. This requirement will apply first to the graduating class of 1983.

The Salem school district spent three years developing the core curriculum in every subject area. Teams of teachers then selected the goals and objectives, involving parents through local school building committees. (These groups continue to meet monthly and review materials that have been developed.)

Thus far mathematics, reading, and writing are actually being tested in the schools; tests in literature and communications are under development. The MSO project is directed by the district's Office of Assessment.

Goals and Purposes

General goals. Statewide goals fall into two categories. The first is that students must fulfill performance requirements in the following areas: reading, writing, and computation. The second broad goal is that students in the Oregon system should have the opportunity to receive an education that will help students to achieve the following survival and life skills:

(1) become learners--develop positive skills about learning as a lifelong endeavor;

(2) develop skills necessary to become self-directed individuals;

(3) make appropriate career choices;

(4) act responsibly as citizens of state, nation, and world;

(5) become intelligent, responsible consumers; and

(6) learn rights and responsibilities of family members, and acquire skills and knowledge to strengthen and enjoy family life.

As mentioned, the Salem district attempts to meet these two goals through two different testing programs: the Minimum Skills Objective Tests for basic skills and the Competency Performance Indicators for survival/life skills.

Competencies

To comply with the State mandate for students to pass life skill competencies in order to graduate, the district of Salem selected 35 competencies which were used to generate the CPI tests. These represent survival/life skill competencies (as compared to some other local school districts in Oregon which selected basic skills competencies).

Table 1 lists the 35 competency performance indicators used by the Salem School District.

To measure the progress of students toward attainment of state-mandated basic skills goals, teams of teachers selected objectives used to generate Salem's MSO tests. Table 2 is a list of those objectives (competencies).

TABLE 1

Competency Performance Indicators in the School District of Salem, Oregon

1.	Read newspaper articles/answer questions
	Apartment rental agreement
1.2	Recall five details of oral communication
1.4	Summarize points of a discussion
1.5	Respond to a job notice
1.6	Compute gas consumption
	Determine simple interest rates
	Measure object in metric/English units
	Balance a checkbook
	Make correct monetary change
1.7	Cite energy effects of computers
	Classify renewable/non-renewable resources
1.8	Engage in two leisure time activities
	Cite helpful/harmful effects of drugs
	Apply first aid procedures
	Describe a healthy diet
1.9	Identify community resources
	Know sources for consumer aid
2.1	Describe social/government services
	Demonstrate knowledge of voting processes
	Understand payroll stub
	Complete simple tax forms
2.4	Identify environmental problems
	Know effects of garden/household chemicals

TABLE 1 (continued)

2.5	Pass written driver's test or equivalent
2.6	Plan monthly budgets
	Cite merits of various credit plans
	Know influences on consumer purchasing
3.1	Demonstrate safe working practices
	Report grooming requirements
3.3	Identify/solve problems in work setting
3.4	Know entry requirements for job choice
3.5	Demonstrate minimum employability
	Apply/interview for real/simulated job
	Outline steps to seek employment

TABLE 2

Minimum Skills Objectives in the School District of Salem, Oregon

Reading

1. Given either a story or short informative selection, the student will answer with 80% accuracy inferential questions related to the material.

2. Given ten sentences containing cause-effect, sequential order or comparison-contrast relationships, the student will name the relationship and identify the words that signal the relationship with 90% accuracy.

3. Given three different purposes for reading, each implying the use of a different approach, i.e., moderate rate, skimming, scanning, surveying or profunding, the student will demonstrate and describe for the teacher the most efficient approach to reading for each purpose.

4. The student will demonstrate the ability to combine organizational skills by summarizing in writing an article of 1,000 to 1,500 words into a single paragraph of no more than 100 words containing the main ideas and relevant supporting details of the article.

Mathematics, Item Groups

1. Whole number
2. Fractions
3. Decimals
4. Percent
5. Conversion of units
6. Geometry
7. "Story" (Verbal) Problems

TABLE 2 (continued)

Writing. In the writing sample given in grades 3, 4, 6, and 8 and in the senior high, the student is to demonstrate the ability to communicate in prose by organizing, writing, and polishing a paper of at least four paragraphs which consistently and clearly develop the student's thesis or theme. The finish draft should be legibly written, have adequate margins and a title, and should be free of distracting errors in sentence structure, punctuation, capitalization, usage, and spelling.

Standard and Standard Setting

Standards for the survival/life skills competencies are set by each local district in Oregon. In Salem, classroom teachers assess the CPIs. In many cases, the teacher's judgment is used to select the specific measurement instrument and establish criteria for passing. The district issues a manual to all teachers indicating ways of assessing these competencies, and runs in-service and summer workshops to consult with teachers on assessment of competencies and establishment of criteria for passing.

In contrast, the MSO tests are administered by the district's Assessment Center. Most of the initial work to establish standards has been done by teachers during in-service and summer workshops, working under the supervisors of the Assessment Center.

The total MSO reading test has a value of 100 points, and students must achieve a score of 80% to pass the test. This standard was set by teachers after the district explored the possibility of setting a passing score based upon subtest scores.

The mathematics test is a 65-item test which was written by district teachers and field-tested in the spring of 1979 on ninth-grade through twelfth-grade students (2,208 in the sample). The teachers will use the field-test data to set a cutoff score based upon the overall test score and not upon subtest scores.

The writing assessment was given for the first time in the spring of 1979 and was scored according to a simple pass/no pass holistic system. Readers scoring the papers were provided with descriptions of papers rated high, middle, and low on which they could base their pass/no pass decisions. Since only 40% of the students passed in this first scoring of the test, the district is considering other standards and scoring procedures.

Target Groups and Testing Schedule

The Minimum Skills Objective Tests are given twice each semester in the thirteenth and sixteenth weeks. Students who fail any test at the first administration (at 13 weeks) may retake it at 16 weeks or the next semester. The mathematics test is administered to all students in grade 9; the writing test is given to selected students in grade 8 and to senior high students; and the reading test is given to students in grade 9.

To meet the requirements in survival/life skills, a student may complete a course to pass a particular competency (CPI) or, may challenge a competency and take a test to demonstrate mastery of that competency. Final decisions regarding CPI tests are up to the school and teachers.

Test Instruments

Mastery of the CPIs is measured by the classroom teachers. In many cases the teacher's judgment is used to select the specific measurement instrument and to determine if a student has passed a competency. The Office of Assessment consults with teachers through in-service and summer workshops on using new assessment instruments and setting up criteria for passing.

The MSO reading test was developed and field-tested in 1978. The test, developed by district teachers during special workshops, originally had 45 multiple-choice items and some reading passages. Field-testing revealed that the test was too short; it now contains 75 items and a 500-700 word passage that the student must read and summarize in 50-75 words. The maximum score that a student can achieve on the reading passage is 25 points. In scoring the passage, the teacher assigns 5 points for each of the following:

(1) main idea;

(2) beginning supporting detail;

(3) middle supporting detail;

(4) ending supporting detail;

(5) one more supporting detail.

Each of the 75 multiple-choice items is worth 1 point, so that the student can score up to 100 points. The passing score is 80 points.

The mathematics test is a 65-item test. Part I has 41 items and covers whole numbers, fractions, and decimals; Part II has 24 items 7nd covers percent, conversion of units, geometry, and "story" (verbal) problems. The test was written by district teachers and was field-tested in the spring of 1979 with a sample of 2,208 grade 9 and grade 12 students. The teachers will use the field-test data to set the cutoff score.

The writing test is as follows: students must write an essay of four to six paragraphs in length on a more complex topic (e.g., "What are the enemies of humankind?"). Students are instructed to proofread their papers very carefully.

Teachers will continue to write new test items during summer workshops to develop parallel test forms for the MSO program. New items will be field-tested, and the data used to generate parallel test forms.

Test Administration

The MSO tests are administered twice each semester at weeks 13 and 16. Students may also challenge the tests and take them at another time. Administration of CPI tests is left to teachers' discretion.

The district is strict on test security. Every test booklet is numbered; booklets are counted before they leave the Office of Assessment and recounted when they return. Separate answer sheets are used so the test booklets can be reused. High school work-study students help do the checking and packaging of test booklets.

Scoring and Analysis

All scoring of CPI tests is done by teachers, who record percentage correct or mastery/nonmastery, as appropriate; teachers also make the final determination of overall CPI mastery. Originally, all record keeping was done manually by teachers; it is now computerized. Data is recorded on a National Computer System (NCS) scan sheet, with each of the 35 Competency Performance Indicators on the sheet, and put into a computer system.

Scoring of MSO tests is also done through optical scanner answer sheets, with the percentage correct for each test being recorded. Item analysis gathered through field tests is used to create parallel test forms. The statistics used for field-test analysis are the KR20 or KR21 and point-biserial statistics. The district explored the use of Rasch statistics, but decided against using this approach. Test items are screened for bias through content validation.

Reporting/Dissemination

The district shares computer facilities with local government agencies, but has its own remote job entry (RJE) system. The NCS scanner is owned by the school. Each school gets monthly status reports on students' progress toward mastery of the competency performance indicators. Students get a quarterly report on the completion of these CPIs along with the usual grade reports.

Salem has also done an intensive study revising report cards to reflect all testing data which are generated from both teacher-made and published tests, such as those found in textbook series, as well as the criterion-referenced tests which most teachers seem to assign.

The report of this study shows also that most parents (87%) and teachers (75%) would like to discuss standardized achievement test scores at a fall parent-teacher conference. (Most teachers (67%) report assigning student scores based on such tests; Hartzell, 1979.)

Provisions for Special Populations

According to State guidelines, local districts are permitted to alter competency requirements for special populations or to waive testing requirements entirely for individual students. In Salem, there are 500-600 Mexican-American students who are given bilingual instruction until the sixth grade, when they are moved into the regular school programs and subject to MSO and CPI testing.

Special needs students are handled on a case-by-case basis: some are mainstreamed, and some are placed in special classes, but all decisions with respect to testing are made individually.

Use and Implications of Test Results

Consequences to students. The class of 1980 will be the first class required to pass the 35 CPIs (Competency Performance Indicators, or Life/Survival Skills) prior to graduation. A remediation program has not been set up at this time, since it is being redesigned. A student who does not pass these 35 CPIs will receive a certificate instead of the usual diploma.

State law requires that students master basic skills (Salem's MSO test) by the end of the junior year. However, the State has put no consequences on a failure to master the basic skills, so that the basic skills program is not tied to graduation. In Salem, however, students who do not pass the mathematics or reading basic skills tests are required to undertake a remediation program. A student who does not pass the writing test may not take a higher-order English class in high school until the test is passed.

Consequences to programs. The director of the Office of Assessment believes that the instructional program will be strengthened as a consequence of the assessment program. For five years the teachers and administrative staff have been redesigning the curriculum so that it follows an orderly sequence from grades 1-12. Tests to measure the effectiveness of this program are now being designed.

Program Resources and Costs

General program staffing. The district Assessment Office gives teachers explicit directions on administering the tests appropriately, and on appropriate measures for ensuring test security. The tests have been largely developed by the teachers. The district also uses work-study students to help with the dissemination of testing materials.

Approximate costs and funding sources. The Minimum Skills Objectives Tests developed by teachers and Office of Assessment staff have cost about $15,000 per year in teacher time and supplies. Costs for the CPIs have been mainly for work-study students' and teachers' time. All funds are supplied through the annual budget of the Salem school district.

Program Evaluation

To date, no evaluation of the Salem assessment program has occurred, and none is anticipated in the near future.

Future Directions

The district is planning a coherent flow from grades 1-12, and developing tests to ensure the effectiveness of this curriculum.

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RHODE ISLAND

Competency testing in Rhode Island was requested by the State Board of Regents (State Board of Education) in May 1978. The main purpose of the program is to provide information to the Board of Regents and the Commissioner of Education on the progress of students in mastering basic skills. The information will be used by the Board of Regents in allocating resources and by the Rhode Island Department of Education in providing technical assistance. While the Board of Regents has the power to make all decisions about the establishment and administration of the competency testing program, the Board sought the advice of a State Standards Council (SSC) which is composed of business persons, representatives of various educational and parent-teacher groups, and citizens from all areas of the State. The Council chose the specific basic skills and minimum competencies, and these have been reviewed by the Commissioner and approved by the Board. A pilot test will be given in the school year 1979-80, and passing scores will be determined from the results of this pilot. Actual testing will begin in 1980-81. The program will make use of sample testing, not census testing, and results will not be linked to graduation, promotion, or early exit.

Legislative and Policy History

Policy history. In the fall of 1977, the Rhode Island State Board of Regents began an inquiry into competency testing, an inquiry which sprang from the Board's interest in developing a comprehensive examination which might be tied to graduation and promotion requirements.

In November 1977 the Commissioner submitted a policy draft which called for a competency testing program linked to graduation and promotion requirements. The Commissioner proposed to solicit public reaction to his proposal and to return with his final recommendations in the spring of 1978.

During the spring of 1978 the Rhode Island State legislature also considered the question of competency testing. Two bills proposing that the State school system require competency testing were introduced, but neither of the bills was passed.

After gathering the opinions of principals, teachers, and school committees across the State, the Commissioner decided against recommending the draft policy of building competency tests into graduation and promotion requirements. He had come to the conclusion that the "quantity and sophistication of data that are possible in a statewide testing program at this time are far less than what would be required to make accurate and fair judgments of those kinds" (Commissioner's Report, p. 6). Instead, the Commissioner proposed the establishment of statewide educational achievement standards at three different levels: (1) Basic Skills, (2) Minimum Competency for Life Skills, and (3) Excellence in Advanced Life Skills, Scholastic and Cultural Achievement.

On May 11, 1978, the Regents adopted the Commissioner's recommendation and mandated the establishment of a statewide competency testing program. In mandating competency testing, the Board's interest was to "establish, maintain and monitor instructional standards that will substantially lift the level of educational achievement in the State of Rhode Island" (Commissioner's Report, p. 31).

To initiate the competency testing program the Regents instructed the Commissioner to recruit a "broadly representative" State Standards Council. The Council was to submit its recommendations to the Commissioner, who would review these recommendations, make his own analysis and recommendations, and then submit both the views of the Council and his own in a report to the Regents in the spring of 1979.

The Commissioner recruited a Standards Council that was composed of business persons, parents and citizens, and members of educational advisory groups, parent-teacher associations, and professional education associations from throughout the State. The Council met 12 times between September 1978 and April 1979, and concentrated its efforts on defining the basic skills and minimum competencies and on determining at which grades these skills should be measured. The Council submitted its recommendations to the Commissioner, and he then forwarded the SSC views and his own recommendations to the Board of Regents in April 1979.

The Commissioner accepted most of the SSC recommendations. Since the issue of whether the tests should be administered on a census or sampling basis was debated within the Council, even though it ultimately recommended census testing, the Commissioner sought to resolve the conflict by striking a middle road between census and sample testing. He suggested that the Regents sample-test for both minimum competency and basic skills, and still allow for additional students to be tested if either (1) the local school district thought it would provide useful information about that student, or (2) the parents wanted that student tested. The Regents agreed with the Commissioner's view on this point and accepted all of his recommendations.

Phase of implementation. During 1979-80 there will be no statewide testing. During the summer of 1979, the Board of Regents chose the ITBS, 1978 edition, as the standardized test for basic skills, and for minimum competency testing the Department will use criterion-referenced testing measures already developed specifically for Rhode Island. The summer of 1979 is also the deadline for choosing one or more administrative sites for the basic skills and minimum competency pilot tests. The formal competency testing program will begin in the year 1980-81.

Because the Board of Regents believes that the basic skills and minimum standards tests should have priority, the development of standards of Excellence in Advanced Life Skills, Scholastic and Cultural Achievement has been postponed until the basic skills and minimum competency testing program is operational.

Goals and Purposes

General goals. As stated previously, the Board of Regents' general purpose in adopting the competency testing program is to "establish, maintain and monitor instructional standards that will substantially lift the level of educational achievement in the State of Rhode Island." In the Commissioner's view, the testing program is to define minimum performance standards for "those skills that are generally seen as essential by the community at large." It is the intent of the Board of Regents, the SSC, and the Commissioner to ensure that the Rhode Island educational system provides students with both academic and practical knowledge by testing students in both areas. It is important to note that graduation, promotion, or early exit are not linked to passing these examinations.

Specific purposes. The Rhode Island Competency Testing Program is to:

(1) provide the Board of Regents and the public with a general idea of the number of students across the State who are having difficulty achieving "a modicum of proficiency in basic skills";

(2) provide both the Board of Regents and the Department of Education with information as to the specific areas of instruction which need strengthening.

(3) provide the Board of Regents and the public with information about the achievement of Rhode Island students relative to the achievement of students across the nation by comparing the two sets of scores for certain standardized tests; and

(4) assist teachers in identifying students who would benefit from a diagnostic analysis.

Competencies

The State Standards Council was interested in measuring both basic skills in academic areas and minimum competency in life skills. The Council recommended and the Commissioner and Board of Regents agreed that the areas in which students should be tested for basic skills and competencies should be (1) reading, (2) language arts, (3) mathematics, and (4) cultural arts.

Since the State Standards Council wanted to avoid duplicating the work of previous researchers, it drew upon the reports of the Center for the Study of Evaluation (UCLA) in choosing specific basic skills. The SSC also drew upon findings of the researchers employed for the 1975 Rhode Island Master Plan for Evaluation.

In the area of basic skills the SSC selected skills from a list prepared by the Center for the Study of Evaluation. This list was originally made up after the Center reviewed statements of philosophy, goals, and objectives from many state and local agencies across the country. After some deliberation, the Council chose 23 skills from the Center's list of 109: six in reading, five in language arts, six in mathematics, and six in cultural arts. The Commissioner agreed with the Council selections and the Regents accepted these skills as the test targets. Table 1 gives a list of the skills selected.

In defining specific skills for minimum competency in life skills, the SSC drew upon a set of 75 performance indicators which were formulated for Rhode Island's 1975 Master Plan for Evaluation. The SSC selected 35 skills from the Master Plan list of 75 and then added 21 additional skills; in reading, 22 skills were selected (nine in Reading Comprehension and Word Recognition, 13 in Reading for Information and Interpretation); in language

TABLE 1

Examples of Basic Skills Objectives in Reading,
Language Arts, Mathematics, and Cultural Arts

Reading

1. LISTENING: Listens actively and attentively. Grasps the content, intent and mood conveyed by the speaker. Shows understanding of the meaning of spoken words. Visualizes characters and events while listening. Follows the train of thoughts of speech and the plot of a play, story, or movie. Listens selectively with a given purpose in mind. Follows oral directions.

2. SPEAKING: Participates in discussions, effectively organizing own thoughts and reactions in responding to others. Summarizes information and relates stories and experiences effectively. Speaks grammatically, fluently, and with good pronunciation.

3. WORD ATTACK SKILLS: Identifies the different sounds in words using phonetic skills or structural clues. Knows relationships between sounds and their written forms. Identifies letters, syllables, roots, prefixes, and suffixes.

*4. RECOGNITION OF WORD MEANINGS: Shows understanding of the meanings of written words by identifying definitions, similar words, illustrations, synonyms, or antonyms. Knows different meanings that the same word may communicate.

*5. READING COMPREHENSION: Understands material read. Understands the meaning of words from context. Follows written directions. Identifies topic sentences, main ideas, and intent of the author, and finds supporting details and illustrations in the text. Keeps track of the times and places in which events occur as well as other relationships. (Reads at a rate appropriate to the material and purpose.)

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* Skill which is difficult to assess, and which, therefore, may not be tested in the near future.

TABLE 1 (continued)

Reading (continued)

*6. ORAL READING: Reads aloud at a suitable pace, with correct pronunciation and appropriate vocal expression. Communicates the mood and the intent of the author.

Language Arts

1. SPELLING: Knows the spelling of frequently used words. Applies spelling rules, phonetic skills, and previous vocabulary knowledge to the spelling of new words and the detection of spelling errors.

2. PUNCTUATION AND CAPITALIZATION: Knows and uses correct punctuation, abbreviations, and capitalization.

3. GRAMMATICAL SKILLS IN WRITING: Knows and uses rules of usage, agreement, and case appropriate for fourth-graders. Recognizes, revises, and constructs complete, grammatical sentences. Recognizes and illustrates grammatical transformations. Identifies subjects, predicates, parts of speech, modals, articles, verb forms, tenses, participles, and adverb, adjective, and noun phrases and clauses.

*4. PENMANSHIP: Prints or writes neatly and legibly. Writes with ease and accuracy.

*5. EXPRESSION IN WRITING: Finds various ways appropriate for fourth-graders to express the same thought, and evaluates their effects on the reader. Produces writing that shows individuality in content and expression. Revises written work by eliminating unnecessary wordiness, illustrating unsupported ideas, and correcting inconsistencies in style and sentence structure.

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* Skill which is difficult to assess, and which, therefore, may not be tested in the near future.

TABLE 1 (continued)

Mathematics

1. KNOWLEDGE OF NUMBERS: Understands whole numbers. Differentiates between numerals and numbers, odd and even numbers, prime and composite numbers. Identifies factors, multiples, and relative primes of a given number.

2. KNOWLEDGE OF NUMERAL SYSTEM AND NUMBER PRINCIPLES: Reads, recites and writes numerals. Understands place value and the rounding of numbers. Understands the commutative, associative and distributive properties, inverse operations, properties of 0 and 1, negatives, and reciprocals. Finds and evaluates simple numerical rules based on observation.

3. KNOWLEDGE OF NUMBER RELATIONSHIPS: Understands number relationships, number sentences, variables, and formulas. Reads sentences using letters or frames and equality or inequality signs, and relates them to quantitative statements in English. Solves or graphs equations and inequalities. Tests relations for reflexivity, symmetry, and transitivity.

4. SOLUTION OF WORD PROBLEMS: Finds or estimates solutions to word problems in mathematics, using knowledge of arithmetic and measurement. Expresses problems as computations.

*5. PERSONAL USE AND APPRECIATION OF MATH: Independently applies math knowledge, skills and strategies to such personal activities as comparison shopping, game participation and hobbies.

6. MEASUREMENT KNOWLEDGE AND SKILLS: Understands English and metric concepts of weight, length and time. Uses instruments to measure distance, weight and time. Estimates answers and their degree of precision. Understands metric and English units.

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* Skill which is difficult to assess, and which, therefore, may not be tested in the near future.

TABLE 1 (continued)

Cultural Arts

*1. ART: Shows awareness of the colors, forms, shapes, and simple designs that can be found in objects and the natural environment.

*2. MUSIC: Recognizes music as a means of expression--specifically simple rhythm, melodies, tones and creative movement to music.

*3. HEALTH AND SAFETY: Has good eating, teeth care, hygiene, dress and posture habits, and gets enough rest, sleep and exercise. Knows traffic and safety rules and how to make the environment safer.

*4. ATHLETICS: Shows ability to perform skills identified as appropriate for his/her age group by the President's Council on Physical Fitness.

*5. CREATIVITY: Shows awareness of the various strategies for problem-solving and can look at things in different ways. Shows imagination, originality and inventiveness. Can find new uses for objects.

6. CULTURAL INSIGHT: Recognizes cultures that differ from his/her own. Recognizes the principal values of a given culture.

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* Skill which is difficult to assess, and which, therefore, may not be tested in the near future.

arts, 11; in mathematics, eight; and in cultural arts, five. The Commissioner agreed with the Council's choice of minimum competency skills and the Board of Regents accepted these skills as the test targets. Table 2 lists the skills selected.

Some of the skills listed in the tables may not be included immediately in the statewide testing because they are difficult to measure. However, the SSC, the Commissioner, and the Board of Regents have listed these skills as official testing targets and hope to assess them when accurate and inexpensive tests have been developed. These skills are marked by an asterisk (*) on Tables 1 and 2.

Standards and Standard Setting

At the recommendation of the Commissioner, information will be gathered during 1979-80 which will enable the Commissioner and the Board of Regents to determine passing scores for the examination. The following data will be gathered by a pilot test which is to be administered in an area within the State that is representative of Rhode Island as a whole:

(1) an estimate of the average score that a representative sample of students can be expected to achieve;

(2) an estimate of the distribution of scores that can be expected from a representative sample;

(3) the average score and the range of scores registered by all students who have been judged "borderline" by their teachers in the skills specified.

In addition to recommending that this information be obtained, the Commissioner also proposed that the standards not be set higher than the lowest scores attained by those involved in planning and implementing the program, including members of the State Standards Council and the Board of Regents. According to the Commissioner, the rationale behind this recommendation "is that every member of these groups should automatically be considered to have substantially exceeded the point of minimum competency by anyone's definition, and that any student who can match the performance of any one of them patently deserves also to be automatically considered to have exceeded minimum competency" (Commissioner's Report, 1979, p. 28).

TABLE 2

Minimum Competency Skill Areas in Reading, Language Arts, Mathematics, and Cultural Arts

Reading

I. Reading Comprehension and Word Recognition

1. Reading for the Main Idea

   Read an article of several pages and identify the main topic.

2. Reading to Get Details*

   Read a brief descriptive passage and then supply specified details.

3. Reading to Build Vocabulary

   Read a passage consisting mostly of frequently used words and from the context infer the meaning of an infrequently used word.

4. Selecting the Best Way to Verify a Statement

   Select from several specified methods the one best suited to check the accuracy of a given statement.

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* This skill was identified by the State Standards Council in general terms at its final meeting. The exact text was supplied by Department of Education staff subsequently, but the Council has not had an opportunity to review the full statement of the skills definition as it is presented here.

TABLE 2 (Continued)

Reading (continued)

5. Reading for an Understanding of Cultural Pluralism

   Read an explanation of cultural pluralism and identify situations which reflect the concept as stated.

6. Reading for an Understanding of the Principle of Equality

   Read an explanation of the principle that all human beings are fundamentally equal and identify intergroup or interpersonal behavior which does or does not violate that principle as stated.

7. Reading Newspapers Critically*

   Read a piece from a newspaper and determine whether it consists purely of statements of fact or whether it also includes opinion.

8. Reading to Scan*

   Scan a table of contents, an index, and outline or a summary to obtain a specified piece of information.

9. Library Reference Skills*

   Read an explanation of the major uses of various library reference tools (e.g., encyclopedia, reader's guide, card catalog, newspaper index) and determine which would be most helpful in obtaining a specified piece of information.

II. Reading for Information and Interpretation

10. Reading Manufacturers' Warnings

    Read a manufacturer's warning concerning dangers associated with the use of a given product and distinguish between appropriate and inappropriate uses.

TABLE 2 (Continued)

Reading (continued)

11. Reading Directions for Assembling Objects or Running Machines

    Read directions for assembling a household object or running a simple machine and demonstrate an understanding of the sequence of tasks involved.

12. Reading to Identify Stereotypes

    Read an explanation of stereotyping and determine which judgments represent stereotyping.

13. Reading to Spot Misleading Ads

    Read criteria for determining particularly misleading ads and identify such ads.

14. Reading for Directions to Vote

    Read directions for voting and correctly complete a sample ballot used somewhere in the United States.

15. Reading to Identify Key Political Issues

    Read a brief account of a political campaign and identify the key issue under consideration.

16. Reading to Learn About Balanced Diets

    Examine a chart showing what constitutes a balanced diet and determine whether a described daily diet is well balanced.

17. Using a Map

    Use a map to determine how to arrive at a specified location.

TABLE 2 (Continued)

Reading (continued)

18. Reading to Understand Community Health Problems

    Read an explanation of the basic causes of some community health problem and identify practices which contribute to the problem.

19. Learning First Aid Procedures

    Examine a list of first aid rules and identify for a given situation appropriate first aid procedures.

20. Learning Home Safety Rules

    Examine a list of home safety rules and identify situations which meet the criteria.

21. Evaluating Solutions to Environmental Problems

    Examine several proposed solutions to an environmental problem and determine which would be best from an economonic point of view and which would be best from a community health point of view.

22. Reading Literary Selections for Interpretation and Enjoyment*

    Choose the reading of literature as one significant leisure-time activity and integrate the meanings derived from the literature into one's own conceptual framework.

Language Arts

1. Writing Resumes

    Write a resume and complete a job application which would be acceptable in form to a review panel of personnel officers.

TABLE 2 (continued)

Language Arts (continued)

2. Explaining Personal Goals Clearly in Writing

   Explain clearly and succinctly in writing some personal goal and the reasons for embracing it.

3. Communicating Personal Thoughts in One of Several Mediums of Expression

   Communicate some personal thought or feeling on a given topic clearly and succinctly in one of the following forms: prose, poetry, drawing, musical composition, speech.

4. Listening for Indications of Prejudice

   Listen to a statement and identify any of the content that suggests prejudice against a social, religous, racial or sex group.

5. Communicating Effectively on the Telephone

   In a simulated situation, obtain information of a given type via telephone (e.g., bus schedule information, a certain fact from a reference librarian, the availability of help for a given problem from a public agency).

6. Detecting Logical Errors

   Examine two illogical statements which take different positions on the same issue and identify the error in each.

7. Completing Job Applications

   Complete in acceptable form an application for a position or job with a hiring organization.

TABLE 2 (continued)

Language Arts (continued)

8. Settling Arguments Logically

   Listen to an argument and select from several statements the one that provides the information most likely to settle the argument logically.

9. Obtaining Information Efficiently

   Listen to a question that is answerable with available information and orally propose a means of answering the question with a minimal expenditure of time.

10. Understanding the Functions of Government Agencies

    Listen to a brief description of the functions of a particular government agency and identify those services that would appropriately be provided by that agency.

Mathematics

1. Calculation of Personal Income

   Compute the proper amount of a paycheck from information such as hourly wage and hours worked, commission rate and volume of sales, tips, and payroll deductions.

2. Buying Insurance

   Compare the net costs and benefits of competing insurance policies within each of the various types (e.g., life insurance and property insurance).

TABLE 2 (continued)

Mathematics (continued)

3. Using a Checking Account

   Conduct transactions associated with using a checking account.

4. Completing an IRS Form

   Complete a short form income tax return correctly, both state and federal.

5. Comparison Shopping for Housing

   Calculate the average monthly housing cost for the rental of an apartment, ownership of a single home and participation in a condominium, given a listing of the total yearly expenses in various categories.

6. Calculating the Cost of Running an Automobile

   Calculate the total cost, partial costs, and the average per mile cost of running an automobile for one year, given a listing of yearly expenses in various categories.

7. Retail Sales

   a. Identify the most economical grocery item from a list using unit pricing.

   b. Identify a legitimate sale item and/or discount item.

   c. Check accuracy of sales slips, including taxes.

8. Handling Money

   a. Calculate compound and simple interest, given the amount, the interest rate, and the time period.

   b. Show basic understanding of stock market, bonds market, savings accounts, installment buying.

TABLE 2 (Continued)

Cultural Arts

1. Art

   a. Examine some work of art and describe its structure or theme.

   b. Generate a list of personal criteria by which to judge a work of art and determine whether a given work meets those criteria.

   c. Read descriptions of various forms of art within at least two areas such as literature, music, film, dance, or theatre, and match given works to their forms.

2. Music

   a. Enjoy music activities. Respond emotionally to the rhythm and mood of music and to dance performances. Engage in music activities during leisure time. Find music and dance satisfying as means of self-expression.

   b. Read descriptions of various forms of art within at least two areas such as literature, music, film, dance, or theatre and match given works to their forms.

3. Health and Safety

   a. Examine a chart showing what constitutes a balanced diet and determine whether the described daily diet is well balanced.

   b. Know a variety of foods and their nutritional content, why food needs vary, and how food spoilage is prevented. Understand the need for quiet, proper lighting and heating, clean air and water, body cleanliness and good posture. Know the benefits of exercise and play. Understand how emotional factors relate to health.

TABLE 2 (continued)

c. Have a basic understanding of sex differences, the physical and psychological changes of adolescence, menstruation, masturbation, intercourse, conception, prenatal development, birth, and infant care. Understand sexual expression, the custom of dating and the responsibilities of sex and marriage.

d. Understand the different family life patterns, both past and present. Understand the implications for the family of both birth, and adoption, death, divorce, and remarriage, loss of jobs, and moving.

4. Cultural Insights

a. Have a clear sense of right and wrong, and strive to apply it in daily life. Justify own personal code of ethics. Be sensitive to ethical inconsistencies.

b. Value the cultural variety, racial diversity, and alternative life styles that enrich U.S. society. Recognize the inadequacy of the concept of race, and discount all social stereotypes in forming opinions about others. Be aware of national, racial and religious bias in what people say and do. Be proud of contributions made by other groups.

5. Athletics

Show ability to perform skills identified as appropriate for their age group by the President's Council on Physical Fitness.

Thus, standards will be set by the Board of Regents by taking into account both the data from the pilot test year and the scores attained by groups involved in program planning and development.

Target Groups and Testing Schedule

The SSC recommended that initial testing in the basic skills take place in the fourth grade, and that follow-up testing take place in the sixth grade. The Council chose these two years in the belief that testing should occur early enough to diagnose problems before they have become serious impediments to learning, and yet not so early that students whose maturation rate is slower than that of the majority will be at a disadvantage. The SSC also recommended that testing take place in April to allow students the benefit of instruction for most of the school year before taking the test. The Commissioner agreed with the Council's schedule for testing, and the Board of Regents accepted their recommendation.

For the minimum competency tests, the SSC recommended an initial test during grade 8 and a follow-up test in grade 10. Once again, the Council's rationale is that the tests must take place early enough to make remediation possible, yet late enough to minimize the effects of disparate rates of maturation. On this issue also the Commissioner and the Council agreed, and the Regents accepted their recommendation. The Council made no recommendation for a test date, but the Commissioner proposed that testing occur soon after the beginning of the school year.

The Standards Council also recommended that the statewide basic skills test be administered on a census basis and the minimum competency test be administered on a sampling basis. The SSC decision to recommend that the basic skills test be administered as a census test was debated within the Council itself. SSC members representing NEA Rhode Island, the Rhode Island Federation of Teachers, and the Secondary School Principals' Association went on record as opposed to the census testing recommendation. They felt that a large-scale test would intrude unnecessarily on instructional time.

The Commissioner sought to resolve their conflict by striking a middle road between census and sample testing: he suggested that the Regents sample-test for both minimum competency and basic skills, and yet allow for additional students to be tested if either (1) the local school district thought it would provide useful information about that student, or (2) the parents wanted that student tested. The Commissioner pointed out that this method would be the best way to meet the needs of the State administration, the local school district, teachers, students, and parents: sample testing would provide the State administration with all the information it needs; sample testing would not unduly take up local administrative and instructional time; an option for additional testing would allow the teacher to double-check judgments about problem students; and an option for additional testing would permit parents to double-check a child's progress to determine whether that child is being properly educated.

To summarize, the Board of Regents intends to sample test for 23 basic skills and 56 minimum competencies in four areas: (1) reading, (2) language arts, (3) mathematics, and (4) cultural achievement. Target groups for the basic skills test will be fourth- and sixth-graders, who will take the examination in April of the school year; target groups for the minimum competency test will be eighth- and tenth-graders, who will take the tests at the beginning of the school year. A student who is not selected to take part in the sample testing will be required to take either the basic skills test or the minimum competency test only if a teacher, a local school administrator, or the student's parent so requests.

Test Instruments

Upon the suggestion of the SSC, the State Department of Education enlisted the assistance of staff from both the Curriculum Research and Development Center at the University of Rhode Island (URI) and the Center for Evaluation and Research at Rhode Island College (RIC) in determining how the basic skills were to be assessed. Staff members from URI and RIC reviewed the tests previously used in Rhode Island statewide assessments.

In their final report, they suggested that some of the basic skills could be assessed appropriately through using current editions of the norm-referenced tests used in past statewide assessments. They also suggested that the State consider developing criterion-referenced tests tailored to the instructional programs in districts throughout the State in order to test basic skills such as speaking, listening, and composition, concluding that: "Again, it should be emphasized that no single test will meet all the needs expressed in the report of the State Standards Council. Norm-referenced tests do not provide the best assessment information on many of the skills identified. This can only be done with other kinds of instruments which are geared to the actual instructional programs which exist in the schools around the State" (Commissioner's Report, 1979, p. 25). During the summer of 1979, the State Department of Education selected the ITBS-1978 as the standardized test to assess basic skills.

The Council selected the minimum competencies from a list of 75 "performance indicators" which the Board of Regents had adopted in 1975. Since 1975, criterion-referenced test items have been developed and field-tested for many of the indicators, including a number of those selected by the State Standards Council as minimum competencies. Thus, the Commissioner, in his April 1979 report to the Regents, proposed measuring those minimum competencies for which items were available, and incorporating the remaining competencies as the items are developed.

Test Administration

In his April 1979 report to the Board of Regents, the Commissioner suggested that many of the recommendations concerning the implementation of the program be tried out in one or more school districts in the State that would be representative of Rhode Island as a whole (Commissioner's Report, 1979). Hence, many of the specific details of program implementation will be worked out during the 1979-80 school year at the pilot site or sites. In particular, decisions concerning the administration of tests will be made during this period.

Scoring and Analysis

Test data from the pilot site or sites will be collected during the 1979-80 school year and will be analyzed to yield information on the performance of Rhode Island students in basic skills and minimum competencies. Decisions concerning the kinds of analyses to be performed will be made by the Commissioner.

Reporting/Dissemination

Results of the testing from the pilot year will be reported to the Board of Regents and the Commissioner of Education.

Use and Implications of Test Results

Consequences to students. There are no mandated consequences to students as a result of the policy adopted by the Board of Regents in 1979. Major purposes of the program are to provide information to the Board of Regents and the public about the achievement of Rhode Island students relative to the achievement of students across the nation and to eliminate gross educational failures. The Commissioner also suggests that the information may be used by the Board of Regents "to establish priorities for the allocation of resources," and by the Department of Education "to initiate or strengthen technical assistance to local communities" (Commissioner's Report, 1979, p. 4). How the pilot site or sites will use the information from the first assessment is a decision that will be made at that level. Nonetheless, the Commissioner indicated that there are inappropriate uses for the information that the program is expected to yield. These inappropriate uses "include decisions concerning the promotion and graduation of individual students and evaluations of the professional competencies of individual teachers or administrators--or groups of professionals, for that matter" (Commissioner's Report, 1979, p. 6).

Consequences to programs. The Commissioner and State Department of Education anticipate that there will be some indirect consequences to programs as a result of implementing the program. The Board of Regents will probably be using the results in the allocation of resources and the Department of Education will use the information in planning technical assistance to local school districts in the State. As a result, both the funding for programs and the technical assistance provided for various programs may undergo changes as a result of implementing the program. At the local level, administrators have the responsibility for altering programs on the basis of test results.

Provisions for Special Populations

The following students will not be eligible for testing in the pilot project:

(1) Special education students or those receiving special education services (e.g., mainstreamed children);

(2) Immigrants from non-English-speaking countries who have been in the United States for less than two years.

A decision will be made at a later time concerning provisions for special populations in the large-scale State assessment that will follow the pilot project.

Program Resources and Costs

General program staffing. The Board of Regents provides the leadership for the Rhode Island competency testing program. The Board makes its decisions on the basis of information and policy proposals which are forwarded from both the Commmissioner of Education and the State Standards Council. Measurement specialists from the University of Rhode Island and Rhode Island College have been employed in an advisory capacity. An Evaluation Specialist in the State Department of Education is the primary contact for information about Rhode Island's competency testing program.

Approximate costs. Program costs to date include staff time on the part of the Department of Education. Staff members provided assistance to the State Standards Council and to the Commissioner in the preparation of the report. No figures are available on the amounts spent thus far in program development, nor are estimates available on future costs.

Funding sources. State funds have been used to cover costs to date. State money will also be used for costs to be incurred during the pilot year and thereafter.

Program Evaluation

An evaluation of the testing model that is to be tried out in the pilot testing project will be incorporated into the final report on that project.

Future Directions

Administrators at the State level anticipate that implementing the program on a trial basis during the 1979-80 school year will provide opportunities to test procedures (e.g., the approach to sampling recommended by the Commissioner) and to anticipate problems in implementing the program that school districts are likely to face. The program will be fully implemented in the 1980-81 school year if the pilot testing proves it to be feasible.

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SOUTH CAROLINA

South Carolina established a statewide competency-testing program in July, 1978, when an act (631) was passed to create the Basic Skills Assessment Program and the South Carolina Basic Skills Advisory Commission. South Carolina's program emphasizes statewide standards, diagnosis, and remediation.

The responsibility for implementing the program over a seven-year period lies with the State Board of Education, acting through the State Department of Education. A Readiness Testing program for grade 1, beginning in the fall of 1979, will be initiated by the Department of Education. Standards for this test are being set by the Department staff in the summer of 1979. By 1980-81, students who have completed grades 1, 2, and 3 will be tested in reading and mathematics, and students who have completed grades 6 and 8 will be tested in reading, mathematics, and writing. Finally, by 1981-82, adult competencies will be measured at the end of the eleventh grade. The program, including field testing of instructional programs and materials, is to be fully operative by the end of the 1984-85 school year.

Legislative and Policy History

Policy history. Before the creation of the Basic Skills Assessment Program in 1978, a 1975 survey prepared for the Department of Education by Peter D. Hart Research Associates revealed that there was a widespread concern in the State of South Carolina that public school pupils acquire basic communication and mathematical skills. In August of the same year, the State Superintendent of Education appointed a Task Force to evaluate the effectiveness of the average test scores for the State's public high school program. In 1975, South Carolina high school students were slightly lower than the national average in reading, language, and mathematics. The Task Force recommended establishment of a minimum achievement level in basic skills as one of the requirements for receiving a high school diploma.

A study prepared by the South Carolina Education Assocation (SCEA) in August 1976 indicated that one of the major problems facing the high schools was to see that their students acquired adequate and effective skills in reading and mathematics.

In 1977 a series of independent efforts brought the issue of minimum competency testing under study by the General Assembly, which under Article XI, Section 3 of South Carolina's Constitution is responsible for public education. The State Department of Education circulated a working draft of a proposal to establish a minimum competency program in South Carolina. The General Assembly, in Act 163 of 1977 (The South Carolina Education Finance Act of 1977), set two requirements:

(1) that the State Department of Education "develop or select and field test a competency-based student assessment program in the basic skill areas of reading and mathematics utilizing criterion reference tests"--Section 6 (5)(d)--; and

(2) that each school district "participate in the statewide testing program as prescribed by the State Board of Education"--Section 6 (4)(c).

Another bill introduced during the 1977 General Assembly called for the implementation of a system of grade-by-grade promotion on the basis of test scores. Although this bill did not become law, it helped generate the legislative support necessary to pass Act 219, which appointed a Special Joint Education Committee. The Committee was directed to study the issue of minimum competency in the basic skills, and to report back to the General Assembly as soon as practicable. To accomplish the task, the Committee assembled information and heard testimony on minimum competency in the basic skills from a large number of educators and public officials. The Basic Skills Assessment Program finally enacted by the General Assembly and approved by the Governor in August 1978 incorporates the following recommendations of the Special Joint Education Committee:

(1) to establish minimum standards in mathematics, reading and writing for grades K-12;

(2) to establish a basic skills assessment program, including the selection and pilot testing of a readiness test to be given at the start of grade 1;

(3) to develop or select, and then field-test criterion-referenced tests to measure achievement in reading and mathematics in grades 1, 2, and 3, and to administer these tests;

(4) to develop or select criterion-referenced tests to measure achievement in reading, mathematics, and writing in grades 6 and 8, and to administer these tests;

(5) to develop or select, and then to field-test a minimum achievement test to measure adult functional competency at the end of grade 11;

(6) to require all local school boards, through their local school districts, to participate in the basic skills assessment program; to use the results of the tests to help in diagnosis of student deficiencies; to adopt procedures to ensure a continual assessment of students' progress in relation to the achievement of statewide minimum standards for K-12; and to provide basic instruction to bring student performance up to the statewide minimum standards when a deficiency is indicated by the results of the assessment tests/procedures.

The legislation established a Basic Skills Advisory Commission to advise the Governor, the legislature, and the Board of Education on the implementation of the mandated program. The Commission, with a total of 25 members, was to consist of seven lay persons appointed by the Governor, six professional educators appointed by the State Superintendent of Education, and six members each to be appointed by the Speaker of the house and the President of the Senate.

Much of the policy for the Basic Skills Assessment Program was formulated during a Department of Education meeting held in 1978 attended by personnel who will be actively involved in the program. These include staff members from the Office of Research, Educational Assessment Section; from the Office of General Education, Curriculum Development Section; and from the Office of General Education, School Services Section. In addition, the Director of the Department of Field Services, National Assessment of Educational Progress was invited to the meeting.

Phase of implementation. The program is being implemented by the State Department of Education over a seven-year period according to the explicit timetable outlined in the act.

1978-79

(1) Identification of basic skills objectives

(2) Selection of Readiness Test for grade 1

1979-80

(1) Test development, field-testing, and test revision, grades 1, 2, 3, 6, and 8

(2) Begin administration of Readiness Test, grade 1

1980-81

(1) Begin administration of tests, collection of baseline data, grades 1, 2, 3, 6, and 8

(2) Development or selection, and field-testing, eleventh-grade test

(3) Begin field test of basic instructional programs and materials for use in developmental activities in first grade in conjunction with Readiness Test

1981-82

(1) Begin administration of eleventh-grade test

(2) Field-test basic instructional programs and materials for use in conjunction with the testing of grades 1, 2, 3, 6, and 8, or in other grades when appropriate

1982-83

(1) Administration of all tests

1983-84

(1) Administration of all tests

1984-85

(1) Completion of field-test programs and materials

Goals and Purposes

General goals. The South Carolina program was established on a statewide basis to ensure that all students will acquire basic skills in reading, writing, and mathematics, and thereby to help restore public confidence in the State high school diploma. By specifying the statewide educational objectives in the basic skills, and by setting minimum standards of achievement for these skills, the State hopes to achieve its purposes. These minimum standards will not be used to make decisions on student promotion. The program will, however, be designed to permit early detection of student deficiencies and will ensure that the local school district gives instruction to remedy these deficiencies as the student moves through the school system.

The results of the achievement testing and the recommendations of the Basic Skills Advisory Commission are to be presented in the form of an annual report to the Governor, the General Assembly, the local school districts, and the public in order to disseminate information which will serve both as a basis for discussion and an impetus for necessary changes and modifications in the program.

Specific purposes. The specific aims of the program are to provide diagnosis and remediation, as appropriate, for students whose command of basic skills is deficient. Early detection, it is hoped, will make it possible to deal with student deficiencies before they are compounded as the student progresses to a higher grade. In cases of student deficiency, the State requires the local district to inform a student's parents/guardians of the test results and to suggest ways in which the parents/guardians can assist the student. Although minimum standards of achievement are to be established for each grade, there has been no legislative requirement that the standards be used as a basis for promotion or retention of students.

As mandated in the act, the State Board of Education, through the State Department of Education, has also been charged to select or develop and field-test basic instructional programs during school years 1980-81 through 1984-85 in reading, writing, and mathematics in at least five representative school districts. These instructional programs will be designed to raise student performance to statewide standards.

Competencies

The competency-based testing program will measure student levels of achievement in the basic skills of reading, writing, and mathematics. Both the academic and life skills will reflect school-based learning, since the legislature and the Board of Education share the view that the program should emphasize skills in reading, writing, and mathematics. Criterion-referenced measures will test achievement in mathematics and reading in grades 1, 2, 3, 6, and 8; writing achievement will also be tested in the sixth and eighth grades. The competency test for the eleventh grade has not yet been developed, but it is to measure "adult functional competency." Adult functional competency is defined as "independent literacy," or the skills and knowledge necessary to function independently and successfully in assuming the responsibilities of citizenship. The specific skills to be measured have not yet been identified, but will most likely include writing, reading, and mathematical skills.

Although the Special Joint Committee recommended that successful completion of the eleventh-grade test be made one requirement for a high school diploma, the law does not include this provision.

Guidelines for the selection of K-12 objectives were established during the 1978 meeting of the Department of Education. The school and life skill objectives will service (1) as a guide for the basic skills curriculum, (2) as a means of measurement, (3) for the purpose of instructional diagnosis, and (4) as a means of presenting the aims and goals of the program to the public. The guidelines specify that objectives must be limited to school-based learning, that they must be cognitive in nature, and that they should represent learning outcomes which are the result of accomplishing several enabling objectives. The meeting also favored some overlap of objectives between grades, and the inclusion of objectives of all levels of difficulty. Finally, every objective was to be measurable either by teacher observation or by some form of paper and pencil testing.

The process of identifying K-12 statewide objectives began when the State Superintendent invited all school district superintendents to submit their local objectives for consideration as statewide objectives. From the master list of objectives which was compiled from the lists of the 23 responding school districts, a Department of Education committee extracted a preliminary list of kindergarten objectives. This list was then reviewed and revised by all the school districts in the State, and by a sample of kindergarten and first-grade teachers.

Next, this revised list was submitted for review once again to the same group of educators. At the same time, the revised list of kindergarten objectives was presented to the general public in the newspapers.

A response form accompanied the list in order to permit readers to express their views and comments.

The Department of Education contracted with Instructional Objectives Exchange (IOX) to help identify the objectives for grades 1-12. IOX prepared a preliminary list by drawing from the materials submitted by the local school districts and materials submitted by other states. The list was then reviewed by three committees, one each for reading, writing, and mathematics. The committees included educators and content specialists appropriate to each content area. Members of the State Board of Education and the Basic Skills Advisory Commission also participated in this first review and revision.

Next the revised list of objectives was reviewed simultaneously by all the schools in South Carolina, and by the public at eight regional meetings convened for this purpose. The final list of objectives which emerged from these sessions of review and revision was submitted for approval to the Board of Education, and then published and disseminated to all the school districts in the State. These objectives are to serve as the basis for test development according to the mandated implementation schedule.

Standards and Standard Setting

The State Board of Education is to set statewide minimum standards for grades K-12 during the test development phase of the project. Data accumulated during the field tests will serve as the basis for setting standards. The rationale for establishing statewide standards is to provide every student with the "equal protection of the laws," and with an equal right to quality education.

Although the State will assess students against the established standards at the beginning of grade 1, and at the end of grades 1, 2, 3, 6, 8, and 11, local school districts will be encouraged to assess students progress in all grades. Continual assessment will permit the early detection of student deficiencies and allow teachers to provide effective remedial instruction.

The standards for the Readiness Test, which will be given in the fall of 1979, are to be established during the summer of 1979. A sample of kindergarten students was tested this spring to provide the necessary data. According to the Director of the Office of Research of the Department of Education, the Department staff is to use contrasting groups and data from the kindergarten test sample to recommend the statewide standards.

Target Groups and Testing Schedule

All students in grades 1, 2, 3, 6, 8, and 11 are to be tested. It is anticipated that 45,000 students per grade will be administered the test. First-grade students will be tested twice, with the first test taking place at the beginning of the school year to establish their readiness to begin the formal school curriculum. The results of this test will be used to determine appropriate first-grade developmental activities. The second first-grade test will occur at the end of the school year to diagnose student deficiencies in reading and mathematical skills.

Similar criterion-referenced tests will occur at the end of the second and third grades. According to the Joint Special Committee, the reason for frequent testing in early grades is to diagnose and remediate problems in the early learning years. The sixth- and eighth-grades tests will also test writing skills, since the Committee concluded that the subjects in which a student is competent should increase as the student progresses through the grades. The sixth-, eighth-, and eleventh-grade tests will be given in the spring of each year.

Test Instruments

After considering several group readiness tests against the preliminary list of objectives, the Committee decided in favor of a test which is individually administered and selected the Cognitive Skills Assessment Battery for pilot-testing in the 1978-79 school year. This test, modified as necessary, was presented to the Advisory Commission and to the State Board of Education during the summer of 1979; it will be administered to all first graders early in the 1979-80 fall term.

The tests for grades 1-12 are to be developed by the Department of Education. The act specifies the use of criterion-referenced tests for measuring student achievement against the standards established for each of the target grades. The Department plans to contract with an outside agency to prepare the tests. The Department has not yet established the detailed procedures for field-testing or for the method of generating alternative test forms and response modes. In field-testing the eleventh-grade students, however, the Deparment must gather baseline data for the 1981-82 school year through the 1988-89 school year. This baseline data will allow the Department to assess programs in order to assist schools or districts in which the failure of a large number of students indicates the need for program adjustment or modification.

It should be noted that the legislature enjoins the Department of Education to exercise the utmost care to eliminate any cultural bias from the tests.

Test Administration

The Department must buy and distribute all materials for the assessment program, and must train both State and local staff and teachers to administer the tests and interpret the results. On the local level, the act requires every public school board to provide in-service training for its program staff before the 1979-80 school year. The Department is responsible for the security and integrity of the tests but has not yet developed its procedures. The act does not specify whether parental permission for the tests is required, but it does state that any students absent from a test with a valid excuse must be allowed to take the test as soon as possible after their return to school.

Scoring and Analysis

The act requires that test objectives be measurable items, but it does not specify any scoring or analysis procedures. The Department of Education is to assume the responsibility for scoring and analyzing the data from the Readiness Test; all other tests for the assessment program, however, have yet to be developed or selected. It is expected that procedures for scoring these tests and analyzing the data will be developed at the same time as the test instruments.

Reporting/Dissemination

The act requires local school districts to advise the parents of a child who does not demonstrate readiness on the first-grade Readiness Test to take the child in for a complete physical examination. Districts must also provide parents with information about local government health services that are available.

When requested, local school districts must provide, in writing, test results to the parent or guardian of any student. When a student fails to meet the standard set for each grade, the act requires the school district to give the student's parent or guardian test information and an explanation of all deficiencies. The school district must also make suggestions for appropriate assistance that the parent or guardian can give the student. A notice of deficiency will also be filed in the scholastic records of the student concerned.

In addition to the reports to parents, the act requires that the State Board of Education report annually to the Governor, the General Assembly, the local school districts, and the public.

Use and Implications of Test Results

Consequences to students. The act is careful to stipulate that the tests administered under the basic skills assessment program are for diagnostic purposes only, and will only help to determine the instruction which students need to achieve the minimum statewide standards for each grade. Tests are not to determine promotion or, in the case of the eleventh-grade test, high school graduation.

Consequences to programs. The State Department must, by law, select or develop and field-test instructional programs designed to raise student performance to statewide standards. These programs are to be field-tested in at least five representative school districts in the State; they are to begin in the 1980-81 school year and continue until no later than the 1984-85 school year.

The State law also requires that local school districts continuously assess an individual student's progress in relation to the statewide minimum standards of student achievement for grades K-12. The local districts must also provide basic instruction which will help the deficient student bring his performance up to the statewide minimum standards.

The law stipulates that the Department of Education must monitor and evaluate curriculum and instruction methods in each school to ensure compliance with the act.

Provisions for Special Populations

The act permits the State to develop separate standards and a separate testing program for students who are defined as handicapped by federal and State statutes. The State Board of Education has determined that all handicapped students will be tested unless their IEPs indicate that testing is inappropriate. A review of IEPs will be conducted on a case by case basis.

Program Resources and Costs

General program staffing. In South Carolina, the State Board of Education, the Department of Education, and the appointed Basic Skills Advisory Commission have provided leadership in the initial stages of the Basic Skills Assessment Program. The Commission gives its advice and recommendations to the Governor, General Assembly and the State Board of Education. Within the Department of Education, however, the Office of Research has primary responsibility for the planning, research, development, and evaluation of this program. The local districts provide their own staff for test administration and remediation, although the Department is to train local district personnel to administer the tests.

Approximate costs. Total estimated cost of the seven-year assessment is $6,274,704. This figure does not include salaries and support for any additional staff that may be required. Monies available in 1979 were $305,000. During the 1978-79 school year funds were spent to identify objectives for K-12 and to select the Readiness Test. In the 1979-80 school year, funds will be spent to develop field test revisions, and administer instruments for grade 1-3, 6, and 8 and to administer the first grade Readiness Test. In addition, funds will be used to develop or select and field-test the eleventh-grade instrument.

Funding sources. All costs related to the Basic Skills Assessment Program, paid totally from State funds, are provided for in Act 163 of 1977, the South Carolina Education Finance Act of 1977, as implemented by the Annual General Appropriation Act.

Program Evaluation

The Board of Education has not yet established any specific procedures for evaluating program effectiveness, although the act requires the Department to monitor and evaluate local districts' curriculum and instruction methods to ensure compliance with the act.

For the purpose of program assessment, the Department of Education must collect baseline data from the eleventh-grade tests starting with the school year 1981-82 and continuing through 1988-89. The Department must furnish help in establishing remediation programs to the schools or districts in which the baseline data reveal the presence of a large number of deficient students. To provide this assistance, the Department must begin to field-test basic instructional programs and materials designed to raise student performance up to statewide standards beginning in 1980-81, and will continue to field-test programs and materials through 1984-85.

The act also requires the Department to revise and update tests when appropriate, and to consult with the Basic Skills Advisory Commission about any major changes to the program.

Future Directions

South Carolina's Basic Skills Assessment program, designed to develop over a seven-year period, should be fully operative by the 1984-85 school year. The Basic Skills Advisory Commission will continue to exist, however, until June 30, 1991. In the course of putting the minimum competency program into effect, many problems are sure to arise; consequently, the Director of the Office of Research, Department of Education intends to wait until these problems have surfaced before recommending any revisions to the program.

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TENNESSEE

In November 1977, minimum competency testing as a prerequisite for graduation from Tennessee high schools, to begin with the class of 1982, was mandated by the State Board of Education on the recommendation of the Subcommittee on High School Proficiency Testing. The Subcommittee recommended, in particular, that the State Board of Education require students to pass a proficiency test in the basic skills areas in order to receive a high school diploma and also recommended that the Board require local public school systems to administer at least two preliminary tests.

The Subcommittee further recommended that the proficiency test be administered at the end of the eleventh grade and that two additional opportunities be provided for retesting as necessary in the twelfth grade. Local school districts are required to administer a test once at the fourth-, fifth- or sixth-grade level and once at the eighth-grade level for diagnostic purposes. The skills to be tested include mathematics, reading, language, and spelling.

Local school districts are required to select their own diagnostic tests in grade 4, 5, or 6. The eleventh-grade test to be given as a high school graduation test will first be administered to grade 11 students in 1981. The State Department of Education contracted with test bureaus for the development of both the 1978 and 1979 eighth grade test.

Legislative and Policy History

Policy history. In November 1977, the Tennessee State Board of Education approved recommendations of the Subcommittee on High School Proficiency Testing that the State require students to pass a basic skills proficiency test as a prerequisite for receiving a high school diploma. The Tennessee legislature had shown interest in establishing minimum competency testing requirements prior to this time.

In the spring of 1977 the State Board of Education had requested the Tennessee Commissioner of Education to appoint a task force to study high school graduation requirements. The members of this task force, called the Subcommittee on High School Proficiency Testing, included the former Commissioner of Education and representatives from the Board of Education, the Department of Education, the Tennessee Education Association, the Tennessee School Board Association, the Taxpayers Association, Parent/Teachers Association, superintendents, supervisors, principals, and classroom teachers. The Subcommittee was specifically charged with assessing the status of high school seniors with respect to their mastery of skills necessary for graduation. At the same time, the Denver Proficiency and Review examination was given on a pilot basis to high school seniors in 27 schools. As a result of their investigations, the Subcommittee recommended to the State Board that it require students to pass a proficiency examination in the basic skills areas in order to receive a high school diploma. The Subcommittee further recommended, and the Board approved: (1) that the class of 1982 be the first subject to the requirements; (2) that the test be given in the eleventh grade with two additional opportunities to be provided for retesting in the twelfth grade; and (3) that the tests assess skills in mathematics, reading comprehension, vocabulary, grammar, and spelling. Finally, the Board required local school districts to administer some kind of diagnostic test in the same content areas once in grade 4, 5, or 6 and once in grade 8. The diagnostic testing requirement became effective during the 1977-78 school year.

The Board mandate for proficiency testing does not specify the roles and responsibilities of the Board, the Department of Education, or the local school districts; these, however, have evolved during the implementation of the program. In August 1978, the Commissioner of Education informed public school superintendents that the local school system is to choose the test it considers most appropriate for diagnostic testing at the fourth-, fifth-, or sixth-grade level, provided that the test measures at least the skills in mathematics, reading comprehension and vocabulary, grammar and spelling. In an attachment to his memorandum, the Commissioner stated that the grade level chosen for testing (4, 5, or 6) was to be a local option, as was the choice of time of year to give the test. The Commissioner also stated that "identifying and diagnosing students lagging in the skills areas is the responsibility of the local school system."

In the spring of 1978, the Commissioner of Education sent a memorandum to all public school superintendents enclosing the list of objectives for the eighth-grade diagnostic test. The State chose to have this test developed because the Proficiency Testing Implementation Committee had reviewed available diagnostic tests in early 1978 and had found that none matched the State objectives. The Proficiency Testing Implementation Committee, appointed by the Commissioner, was of similar composition to the Subcommittee on High School Proficiency Testing and had 10-12 members. During the process of objective development, the content areas changed from mathematics, reading comprehension, vocabulary, grammar, and spelling to mathematics, reading, language, and spelling. The Commissioner requested that the list of objectives also be distributed to teachers, emphasizing that the objectives represent a minimum level of attainment in the basic skills areas. The responsibility for developing or contracting the eighth-grade test lies with the State.

Phase of implementation. The eighth-grade diagnostic test was the first State test to be administered in Tennessee's minimum competency testing program. The diagnostic test, called the Basic Skills Test, was administered to all eighth-grade students in the spring of 1978 in the basic skills areas of mathematics, spelling, language, and reading. The eighth-graders tested will be in the graduating class of 1982, the first class which must pass the proficiency test for graduation.

The graduation proficiency test will first be given to students in grade 11 in 1981 in the areas of reading, mathematics, language, and spelling. Any students who fail the eleventh-grade test will have two opportunities in their senior year to retake the test.

Goals and Purposes

General goals. According to the Assistant Commissioner of Education the implied goal of the Tennessee program is to diagnose the weaknesses of students in the four basic skills areas to be tested, and to make such curriculum modifications as the test results may indicate.

Specific purposes. Tennessee students must pass the eleventh-grade proficiency test as one of the requirements for high school graduation. It is the responsibility of the local education agency to provide programs and/or methodologies for correcting identified weaknesses. In its analysis of student scores for the eighth-grade test, the State provides the local districts with the information it needs to identify their students and their specific deficiencies.

Competencies

The Tennessee program is designed to test basic school skills rather than life skills. The State Board of Education first approved a list of 50 objectives in the content areas of mathematics, reading, language, and spelling. These are presented in Table 1. The Department of Education contracted with a testing bureau to develop an eighth-grade test based on these fifty objectives. The Basic Skills Test was administered in the spring of 1978.

In the fall of 1979, teachers, supervisors, and administrators from local districts, along with the State Department staff, expanded the list of 50 objectives to 139. In October 1978, the list of 139 objectives was distributed to all the school districts in the State, along with the request that school superintendents, supervisors, and teachers in each district review and rank each objective in terms of its importance. The list of 139 was reduced by this process to 80 objectives for the program: 30 in mathematics, 10 in spelling, 22 in language, and 18 in reading. These are presented in Table 2. The eighth-grade diagnostic test is based on 50 of these 80 objectives; the eleventh-grade proficiency test under development will be based on these 80 objectives or a portion of them.

Standards and Standard Setting

The State Board of Education has set the standards for the eighth-grade test at a passing grade of 70% correct on the test. No standards have yet been set for the eleventh-grade test.

Target Groups and Testing Schedule

Testing is to take place once at the elementary level in grade 4, 5, or 6, and once in grades 8 and 11. The eighth-grade class tested for the first time in the spring of 1978 is the first class subject to the graduation test requirement, and will therefore be the first to take the eleventh-grade proficiency test in 1981.

Diagnostic testing of eighth-grade students was mandated by the State Board of Education as of the 1977-78 school year. There is to be one administration per year in the eighth grade and one per year at the elementary level. Testing is to take place in the spring. When the eleventh-grade test is given, it will be administered first in the spring at the eleventh-grade level, and then offered twice at the twelfth-grade level for those students who failed.

TABLE 1

Tennessee Basic Skills Outline of Objectives Required for Graduation in 1982

Mathematics

1. Add four 3-digit numerals, with regrouping
2. Subtract two 3-digit numerals, horizontal, with regrouping
3. Multiply 3-digit numerals by 2-digit numerals, with regrouping
4. Divide 4-digit multiple of 100 by multiple of 10, no remainder
5. Add three mixed numbers, unlike denominators, with regrouping
6. Subtract fraction from mixed numbers, unlike denominators, with regrouping
7. Multiply mixed number by fraction
8. Divide rational numbers
9. Add two or more decimal numbers, thousandths, with regrouping
10. Subtract two decimal numbers, with regrouping
11. Multiply decimal fraction by decimal number, hundredths
12. Divide decimal fraction by whole number
13. Add measures
14. Subtract measures
15. Multiply measures
16. Divide measures
17. Place value, decimal

TABLE 1 (Continued)

18. Order of decimal fraction
19. Decimal fraction to percent
20. Percent of a number

Spelling

1. Base word, no spelling change
2. Base word, spelling change
3. Spelling/phonetic substitution
4. Spelling/missing letter
5. Spelling/extra letter

Language

1. Capitalization, person or place
2. Capitalization, organization
3. Comma, phrases in a series
4. Period and question mark
5. Usage, irregular verbs
6. Usage, regular and irregular verbs, perfect tense
7. Usage, nouns
8. Subject, noun or pronoun
9. Compound subject

TABLE 1 (Continued)

Reading

1. Synonym in context
2. Antonym
3. Heteronym
4. Words in context
5. Story detail/person, place, or thing
6. Story detail/event or action
7. Story detail/time or setting
8. Story detail/sequence of events
9. Main idea
10. Inference or conclusion
11. Cause and effect
12. Predicting future action
13. Character analysis
14. Descriptive and figurative language
15. Author point of view
16. Fact or opinion

TABLE 2

Tennessee Basic Skills Outline of Objectives*
Required for Graduation
beginning in 1983

Mathematics

1. Add four 3-digit numerals, with regrouping
2. Subtract two 3-digit numerals in horizontal form, with regrouping
3. Multiply 3-digit numerals by 2-digit numerals, with regrouping
4. Add three mixed numbers, with unlike denominators, expressing answer in simplest form
5. Subtract fraction from mixed number, unlike denominator, with regrouping
6. Multiply a mixed number by a fraction
7. Divide a mixed number or a whole number by a fraction
8. Add two or more decimal numbers, with regrouping
9. Subtract two decimal numbers, with regrouping
10. Multiply decimal fraction by decimal number
11. Divide decimal number by whole number
12. Customary units of measurement--equivalency
13. Place value, decimal
14. Decimal fraction to percent
15. Percent of number
16. Divide 4-digit numeral by a 1- or 2-digit numeral with remainder

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* One objective is specifically defined for each of the descriptions included in the table.

TABLE 2 (Continued)

17. Simple word problems: operation
18. Decimal equivalency
19. Reading graphs
20. Finding the perimeter
21. Finding area
22. Linear measurement - customary
23. Linear measurement - metric
24. Writing a numeral for a word name
25. Rounding off numbers
26. Metric equivalency
27. Simple word problems: solution
28. Compare four decimal numbers
29. Determining average (arithmetic mean)
30. Measures of temperature

Spelling

31. Base (root) word, with or without spelling change
32. Spelling/phonetic substitution
33. Spelling/missing letter
34. Spelling/extra letter
35. Contractions
36. Syllabication
37. Alphabetizing
38. Doubling the final consonant
39. Changing "y" to "i" or keeping the "y"
40. Forming plurals of irregular nouns

TABLE 2 (Continued)

Language

41. Capitalization
42. Comma, phrases in a series
43. Sentence punctuation
44. Usage, irregular verbs
45. Identifying complete sentences
46. Subject, noun or pronoun
47. Parts of speech
48. Subject-predicate agreement, inverted order
49. Subject-predicate agreement, compound subject
50. Subject-predicate agreement, indefinite pronoun subject
51. Identifying simple subjects and verbs
53. Word usage/double negatives
54. Commas, on dates and addresses
55. Quotations
56. Letter writing
57. Personal pronoun
58. Agreement of possessive adjectives
59. Adjectives or irregular adjectives
60. Verbs, principal parts
61. Verbs, troublesome pairs
62. Possessive nouns

TABLE 2 (Continued)

Reading

63. Synonyms in context
64. Antonyms
65. Words in context
66. Story detail/person, place, thing
67. Story detail/event or action
68. Story detail/tone or setting
69. Story detail/sequence of events
70. Main idea
71. Inference or conclusion
72. Cause and effect
73. Predicting future action
74. Character analysis
75. Fact or opinion
76. Following directions
77. Fact or fiction
78. Using the dictionary
79. Endings-suffixes
80. Prefixes

Test Instruments

The State Department of Education contracted with a test bureau for the development of the competency test to be administered to eighth-graders. The eighth-grade test given in 1978 consisted of 4 multiple-choice items for each of the 50 objectives. In terms of content areas, then, there are 80 mathematics items for 20 objectives, 20 spelling items for 5 objectives, 52 language items for 13 objectives, and 48 reading items for 12 objectives. The eighth-grade test given in 1979 consisted of 4 multiple-choice items for each of 50 objectives that were randomly selected from the new list of 80 objectives. School systems were not aware of which objectives had been chosen for testing.

The local school districts are permitted to choose the test they consider most appropriate for testing at the elementary level provided it measures skills in mathematics, reading comprehension and vocabulary, grammar, and spelling. The Department of Education believes that, for the most part, local districts have continued to administer the norm-referenced instruments which they previously used to screen students.

Test Administration

Teachers in the local school districts administer all tests. Each local school district appoints a test coordinator who receives in-service training and who, in turn, trains other teachers in test administration. No parental permission is necessary for the tests.

For the first administration of the eighth-grade test, test security was not seen as a great concern by the Department of Education. In the spring of 1978 the tests were shipped to the nine Tennessee district offices, which distributed them to the school districts three or four days prior to administration on the spring statewide testing dates established by the Department of Education. Makeup tests were to be administered during the week of the statewide test dates or during the week after testing. The local districts, however, have the freedom to arrange other makeup dates.

Scoring and Analysis

For the eighth-grade tests and, eventually for the eleventh-grade tests, the following scores are to be computed by the Department for individual students: percent correct on each subtest (mathematics, spelling, language, and reading), and the number of items (out of four) answered correctly for each objective. Whether the student needs remediation in any content area (indicated by a score of less than 70%) is also indicated on this score report. Summary reports that are produced include: (1) score reports by school and subtest for students who have not met the standard on one or more subtests; (2) for each school, the number and percentage of students, listed by objective, who have met the standards of each objective; (3) for each local district (or county), the number and percentage of students who have met the standards of each objective, listed by objective; and (4) a listing by school and subtest of the percentage of students meeting the standards of each subtest.

Reporting and Dissemination

The Department reports State test results to the State Board of Education and sends reports to local district superintendents for them to disseminate within their school systems. The reporting schedule for test results at present is approximately five weeks after testing, a period which the Department will attempt to shorten. The Department provides a score report for each student to be sent home to his/her parents, and results for all students, except the handicapped, become part of their permanent records.

Use and Implications of Test Results

Consequences to students. Beginning with the graduating class of 1982, students who fail any of the four testing areas in the Tennessee Competency Testing Program will not receive a diploma. Students in the class of 1982 are to have three opportunities to pass the test, once in grade 11 and twice in grade 12. Since the grade 11 test has not yet been given, the Department has not had to face the problems which may arise when a student has failed the test all three times.

Consequences to programs. There is no state-sponsored remediation program; each local district is responsible for developing its own program. According to the Department, the addition of courses in specific competency areas, and the development of summer remediation programs are two of the measures which the local school districts have adopted.

Provisions for Special Populations

At the inception of the testing program in Tennessee, no provisions were made for students with special needs. In March 1979, however, the Board of Education adopted various modifications and adjustments for the 1979 proficiency test at the eighth-grade level to accommodate handicapped children requiring special education. According to these modifications, the local district must:

(1) permit, upon recommendation of the Multidisciplinary Team, exemption of pupils verified as handicapped and requiring special education;

(2) permit any eighth-grade child, regardless of handicapping, to take the test if he or she wishes to do so;

(3) furnish the test in large print for the visually handicapped child, and in Braille for the legally blind child;

(4) furnish an interpreter for the deaf or hard of hearing child;

(5) keep careful and detailed summaries of children classified as handicapped so that data for future test program policies will be more informative.

Policies for future testing of students with special needs are still under development.

Program Resources and Costs

General program staffing. Tennessee's proficiency test program is under the jurisdiction of the Division of Curriculum and Instructional

Services of the State Department of Education. The Division receives assistance from the Department's Research, Planning, and Evaluation Office, and receives help with scoring and other services from the Tennessee State Testing and Evaluation Center, which is part of the Division of Curriculum and Instructional Services.

Remediation is the responsibility of the local districts, although regional office personnel may assist them by providing consultant technical assistance. The Supervisors of Instruction in the local districts have developed curriculum materials for each of the four areas tested in the proficiency test program.

Approximate costs. The cost of developing the eighth-grade test was $30,135, which included $18,490 for the test booklets, $550 for the Braille version of the test, and $95 for the large-print test. Costs of scoring and reporting, conducted by the State Testing and Evaluation Center, amounted to $11,000. For the 1979-80 school year, $45,000 has been budgeted for the eighth-grade test administration. The sum includes the costs of developing new items and scoring. There is no cost projection for the eleventh-grade test or for operating the program in the future.

Funding sources. The State Department of Education budget is the funding source for the program.

Program Evaluation

The Tennessee State Department of Education plans an evaluation of its proficiency test program but has not yet come to a decision on the timing and means of implementing such an evaluation.

Future Directions

The State Department of Education has a new Commissioner. It is likely that the Commissioner will reexamine the Proficiency Test Program with a view to determining whether modifications in the program are called for or whether it should continue in its present form.

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HOUSTON INDEPENDENT SCHOOL DISTRICT, TEXAS

Two competency testing policies were adopted by the Houston Independent School District in 1978. The first, for grades K through 6, calls for screening tests to be administered that are developed based on essential learner outcomes on a half-year basis in the elementary grades; the second awards diploma certification to graduates who have demonstrated an eighth-grade level of achievement in the basic skills.

Testing during the elementary grades is designed to screen students to determine their skill mastery at each level, and to assist those who appear to be having difficulty in a particular area. Houston has elected to use district-wide norm-referenced standardized tests in grades 1-6 as screening instruments in reading, language arts, and mathematics. Specific standards have been set at grades 3 and 6, and those who do not meet the standards are individually remediated, sent to summer school, or retained, a decision which is made by a review panel.

The program for high school certification of mastery in the basic skills will provide students with continual remediation if mastery is not demonstrated. The goal of this program is to increase the value of a high school diploma for future employment and education.

Legislative and Policy History

Policy history. Although state legislators in Texas had proposed and debated the merits of several bills that mandate minimum competency testing in the State, they did not enact any legislation until early in the summer of 1979. Therefore, administrators in the Houston Independent School District (HISD) adopted their own policies for student achievement of minimum competencies and developed their competency testing program independent of any statewide requirements.

In May 1978, the School Board of the Houston Independent School District adopted policies of elementary testing for screening purposes and high school competency testing. Impetus for the action came from a number of sources. National Assessment of Educational Progress (NAEP), the College Board (CEEB), and the American College Testing (ACT) program all reported a nationwide decline in student test scores in reading, writing, and computing; the president of U.S. Steel asserted that major corporations had jobs which they could not fill due to the fact that large numbers of high school graduates lacked competency in the basic skills; and, moreover, the Institutional Research Department of the Houston Independent School District concluded, from its routine poll of subgroup school districts in Houston, that student achievement of basic skills relating to both grade promotion and high school graduation had become a matter of prime concern.

Each of Houston's administrative areas has an Advisory Committee composed of teachers, parents, and secondary students. The Advisory Committees recommended that students be certified for eighth-grade competency in reading and mathematics prior to receiving a high school diploma.

With respect to the elementary screening tests, the policy adopted by the Houston School Board in June 1978 calls for assessment of specific basic skills objectives, called "essential learner outcomes." These essential learner outcomes were identified for each semester for grades K-6 by the HISD staff. At the third and sixth grades, student performance both on tests of the essential learner outcomes in language arts, reading, and mathematics and on the Iowa Tests of Basic Skills (ITBS), the norm-referenced standardized test given Houston students in those grades, is used for screening purposes and to help determine promotion or retention.

Any student who scores more than one year below grade level on the ITBS at grade 3 and two years below grade level on this test at grade 6 is reviewed by a panel consisting of the principal and four teachers, one of whom is the student's classroom teacher. This panel makes the decision as to whether to promote or retain the student, considering such factors as the student's overall academic record, results on the objective-referenced tests, and progress through reading programs. For any student who is not promoted, the review committee will prescribe a special basic skills competency curriculum, or alternative remedial program, including a summer school option.

The recommendations for minimum competency requirements for high school graduation that the Houston School Board adopted call for members of the class of 1983 to be the first to receive minimum competency certification in the Houston district. Reading and mathematics are currently tested by the Iowa Tests of Basic Skills. All eighth-grade students must score at grade level or above on both reading and mathematics to fulfill the minimum competency requirements; certification will appear on both the high school transcript and diploma.

For the 1978-79 eighth-grade class, the cutoff score established on the ITBS tests administered in October was 8.2 in reading and mathematics. For any student who scores below grade level (eighth grade, second month) in either subject area, a letter of information, prepared in English and Spanish, is sent to the parents, informing them of the need for additional testing on corresponding objective-referenced Stanford Research Associates (SRA) instruments.

Mastery performance on the Houston Independent School District (HISD) essential learner outcomes as measured by the SRA tests is used as the second check for certification status. Students attaining mastery measured by these tests are considered eligible for basic skills certification. Students not attaining mastery are required to participate in the appropriate remedial classes in the ninth grade.

The first opportunity for additional mastery testing after remediation occurs is near the end of the ninth grade. Students measuring at the mastery level will then be eligible for basic skills certification. Students scoring below mastery level are required to continue remedial instruction until they achieve mastery on equivalent test forms, which are offered each year or until they graduate without certification.

Phase of implementation. In 1978 the Houston School Board adopted policies of elementary diagnostic testing and minimum standards for high school graduation. Provisions for elementary testing were effective in the 1978-79 school year. With respect to graduation requirements, the class of 1983 will be the first to receive certification of competency in the basic skills. Failure to meet the mastery requirements for graduation will result in the student's graduating without certification.

Goals and Purposes

General goals. The general goals for both the elementary and high school Basic Skills Testing programs are:

(1) to modify advancement criteria to ensure continual monitoring and assessment of student progress in designated skill areas;

(2) to provide curricular alternatives for meeting these criteria in the elementary grades; and

(3) to impose district-wide standards for Houston through testing for screening purposes in grades 3 and 6, and through minimum competency testing in grade 8.

Instructional and testing programs administered in all the school grades will provide a continuous assessment of student progress; deficiencies in minimum competency levels will be identified for each student.

Specific purposes. The institution of standards for screening purposes and implementation of minimum competency certification requirements for high school graduation have provided the Houston district with opportunities to:

(1) increase parental involvement through mid- and end-year assessment at the elementary level;

(2) redesign and utilize summer school and remediation programs to better student advantage; and

(3) facilitate appropriate placement through grade-level testing.

Student skill competency is the major focus of both basic skills programs. The programs are designed to provide for student placement, to diagnose skill deficiencies, and to generate curriculum modifications which will remedy these deficiencies. Neither program is designed specifically to provide the basis for program evaluations. Houston has not increased teacher or student accountability through program implementation. However, information-sharing between faculty, students, parents, and the School Board has increased.

Competencies

The specific competencies assessed at grades 3, 6, and 8 are those measured by the ITBS in reading and mathematics. The essential learner outcomes prepared by the HISD staff for each half-year of grades K-6 comprise the subject areas of mathematics, reading, and language arts. These objectives, however, are teacher-assessed and are therefore not a part of the district-wide standards.

The Advisory Committee suggested the formation of a task force of students, parents, and staff to identify living skills (e.g., balancing a checkbook, filling out application forms, reading utility bills, etc.) and the modes of instruction for teaching these skills. Currently, survival skills are not taught in Houston schools, yet, according to the HISD staff, it is becoming increasingly important to the Houston populace that the need for teaching these skills be addressed.

Standards and Standard Setting

Because Houston's policies are in the initial phase of implementation, current methods of defining minimum competency remain the basis for setting standards. The purposes of the established standards are to provide a basis for screening decisions made at grades 3 and 6 and to certify minimum competency in the basic skills, defined as reading and mathematics, at the eighth-grade level.

Those students in grades 3 and 6, specifically, must meet districtwide standards (one level behind grade in grade 3 and two levels behind in grade 6), as measured on the ITBS. Those students who fail to meet these standards will be reviewed on an individual basis by a local review panel and either remediated, sent to summer school, or retained. In order to obtain minimum competency certification in the eighth grade, students must perform at grade level in both skill areas.

Target Groups and Testing Schedule

Currently, the ITBS is used for testing in grades 1-8 in the Houston school district. Results are utilized for different purposes at different grade levels. Those results for grades 1, 2, 4, and 7 are utilized solely by teachers to monitor student progress. Third- and sixth-grade testing was mandated for the specific purposes of screening and providing appropriate follow-up. Four days of testing (one session each morning for four days) are suggested; all students in a grade are to be tested on the same day.

In the eighth grade, the ITBS is administered for the purpose of assessing minimum competence in basic skills required for high school certification. In October 1978, the eighth-grade Iowa Tests of Basic Skills were administered to 16,146 students. In the spring, a second phase of testing occurred in which objective-referenced tests were administered to those students who had scored below grade level on the earlier tests.

Students scoring below eighth-grade level on the SRA tests are required to participate in remedial classes as appropriate in the following fall term. Students have an opportunity each school year to successfully achieve minimum competency requirements on parallel test forms.

Test Instruments

In order to plot student progress every half-year from kindergarten through grade 6, the HISD is using an essential learner outcome model prepared by its staff, and formulated as part of the new accreditation process required by the Texas Education Agency. These essential skills tests are subject to continuous development.

In grades 1-8, the norm-referenced ITBS instruments are administered to test for skill mastery in vocabulary, language skills, work-study, and mathematics. At grades 3 and 6 the ITBS Multi-level Edition, Form 5, is used district-wide; results which measure functional reading are used as one criterion for screening decisions. For the eighth-grade initial testing, ITBS items have been reviewed by HISD for ethnic bias, with such methods as canonical factor analysis and the Rasch model. SRA objective-referenced tests are used for follow-up testing of eighth-grade students. In 1978-79 the two tests administered were: (1) SRA SOBAR Reading Test, Level G, Form L, and (2) SRA Mathematics Test, Level H, Form X. Houston expects to develop its own multiple-choice objective-referenced test forms to replace the SRA tests in the future.

Test Administration

The tests for the elementary grades are administered by the classroom teachers; the seventh- and eighth-grade tests are administered by homeroom/classroom teachers. One week in advance of the test date, the district supplies to teachers manuals detailing test administration procedures and sample materials. The school building principals are responsible for the security and storage of the test materials.

Since the tests at each level require at least four sessions, the district recommends that schools allow four days for testing. In grades 1 and 2, teachers distribute ITBS Form 5 hand-scorable Basic Edition test booklets. The Basic Edition is administered in seven sittings (sessions) spread over a four-day period. Students mark their answers directly into the test booklets. These booklets are consumable and stored in the school building for one year before being destroyed. The tests for the Primary Battery are untimed, allowing all but the slowest pupils to finish.

The ITBS for grades 3-8 require the use of the National Computer System (NCS) trans-optic answer sheet. ITBS testing does not require parental permission.

Scoring and Analysis

The classroom teachers hand-score the first- and second-grade tests. Raw scores are converted to grade-equivalent scores; tables are provided in the Teacher's Guide to show the percentage of students in the national standardization sample who answered each item correctly. In the Teacher's Guide are recommendations from the HISD for using test results to improve instruction in those areas where student/class measurement of particular skills is low. Two consultants from the HISD Group Testing Department are available to schools to assist in the interpretation and use of test scores. Results are recorded on each student's record sheet.

The NCS answer sheets for ITBS testing of grades 3-8 are scored by the Region IV Education Service Center (ESC). Turnaround time for test results to schools ranges from three to six weeks. Printouts from Region IV include the following information:

(1) sample listing--raw scores;
(2) frequency distribution--school and class;
(3) statistical summary--school and class;
(4) class lists;
(5) individual test profiles;
(6) concept item analysis.

The results of ITBS testing are recorded on each student's permanent test record card.

Answer sheets for the eighth-grade follow-up test are scored by SRA; it takes approximately four weeks for test results to be returned. Scores are recorded on the student's permanent test record card. If the student has scored at grade level, certification of basic skills is recorded on the transcript.

Reporting/Dissemination

The audiences for test score reports are the content specialists, administrators, teachers, students, and parents. Houston's Operation Fail-Safe program utilizes test results as one of the criteria for determining a student's occupational potential on the Student Career Planning Profile which is assembled during junior and senior high school. Operation Fail-Safe promotes communication between teachers and parents by means of yearly conferences for the purpose of discussing the achievement test profiles of the student and career choice indications. Discrepancies between student proficiency and the level of competency required for desired jobs/careers analyzed and discussed during these conferences.

Use and Implications of Test Results

Consequences to students. Only students in grades 3, 6, and 8 are affected on a district-wide basis by the results of the ITBS, and these students must meet a stated criterion level on the tests to meet the district-wide standards. Testing in grades 3 and 6 is for screening purposes, while eighth-grade testing is for competency certification. A student in grade 3 or 6 who does not meet the criterion on the ITBS at these levels will be reviewed by a campus panel; that student may be retained at that level to participate in remedial or alternative instructional programs. A student who meets the criterion on the ITBS at the eighth-grade level will receive a diploma with a certification for competency in the basic skills. An eighth-grader who fails to meet the criterion on the ITBS once is required to demonstrate mastery on the objective-referenced follow-up tests. A student who continues to fail to meet the criterion on the tests will graduate, but certification will not appear on the diploma.

Consequences to programs. Curricula are modified as ITBS and SRA test results and analyses are incorporated into instruction by individual classroom teachers to remedy students' deficient areas and skills. Thus far, a reduction in the teacher/student ratio has been noted as directly resulting from student retention at the target third and sixth grades.

Provisions for Special Populations

Special provisions for testing and exemption of certain population groups are made. The Board of Education approved the Advisory Committee's recommendation regarding off-level or alternative testing of students enrolled in Special Services programs. For these students, their special and regular teachers select and administer tests which are geared to each student's functional reading level.

Three populations of Special Services students have been identified thus far for ITBS testing:

(1) ON-LEVEL -- Students capable of taking their grade-placement level ITBS will be tested "on-level."

(2) OFF-LEVEL -- Special Services students not capable of taking the "on-level" ITBS, based on their functional reading level, will be tested "off-level."

(3) SEVERELY DISABLED -- Students whose disabilities are so severe (blindness, severely-involved orthopedic, trainable mentally retarded, etc.) that the administration of a paper-and-pencil response test is precluded should be excluded from testing with the Primary Battery. These students will be assessed through instruction-based appraisal systems.

Off-level testing is not an option for students enrolled in external/federally funded programs, reading center clinics, or other nonspecial services. Test results for Special Services students are reported separately.

Students who are monolingual in a language other than English are also eligible for exemption from the standardized testing program. HISD uses the Language Assessment Scale to measure the oral language proficiency of limited English-speaking students. Those students scoring at Level One in the fall will be exempt from ITBS testing the following spring.

Program Resources and Costs

General program staffing. Responsibilities for the district-wide standardized testing program are shared by various HISD administrative offices; one person serves as a coordinator for the district. The test materials are prepared and distributed to schools by the Materials Section of the Group Testing Department of the Assessment Office. Two consultants from the HISD Group Testing Department are available to assist school personnel in the analysis and interpretation of test scores. The Curriculum Office offers alternative and instructional programs for remedial instruction.

Approximate costs and funding sources. The minimum competency testing program requires an additional $50,000 for staff support that is not covered in the district's annual budget. The cost of the reading labs is about $1,500,000, and the cost of the extra teachers is not yet known. Funding at the elementary level is through compensatory and federal Title I funds, while funding at the high school level is through State funds.

Program Evaluation

Currently there is no formal plan to evaluate the minimum competency standardized testing program in the Houston district. However, Research Department personnel are collecting and analyzing all data in the event that an evaluation model is developed. The Research Department is also monitoring processes of program implementation and development.

Future Directions

Although HISD has had to contend with the difficulties inherent in the implementation and management of a program across 235 campuses within a tight timeline, the district is considering several directions for further exploration and development. First, the HISD staff now plans to develop an objective-referenced eighth-grade test to replace the SRA series currently in use. Also, following additional needs assessments for the teaching of survival skills, Houston may develop instruments to measure mastery of these skills. Equalizing and maintaining common standards district-wide will be a constant challenge to all HISD staff for the dura- tion of the minimum competency program.

References

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UTAH

The Utah State Board of Education mandated basic minimum competency testing in 1977. The intention of the State Board was to evaluate the performance of Utah's high school students and to establish a State educational policy which will emphasize the teaching of basic life skills. Therefore, the Board made successful demonstration of the functional competencies in specified areas a high school graduation requirement. The high school graduation class of 1980 must demonstrate competency as one prerequisite for graduation.

While the State Board of Education mandated the minimum competency testing program, local school districts were given complete responsibility for implementing it--with assistance and guidance from the staff of the State Board of Education. Local district duties include: developing performance objectives, measuring all prescribed competency areas, setting minimum standards, determining specific grades to be tested, establishing the testing schedule, administering the tests, revising regular instruction to ensure that the basic skills are mastered, evaluating the impact of the program, and reporting results to the Utah State School Board, the students, and the students' parents.

Legislative and Policy History

The State Board of Education receives its authority to make policy and set standards for graduation from a constitutional mandate to supervise the public school system and from a specific legislative enactment in the 1953 Utah Code. The 1953 Utah Code gives to the Board of Education the right to set the standards for high schools, and the power to determine whether school systems will receive support from State funds.

On January 21, 1977 the State Board of Education made demonstration of functional competencies a requirement for graduation from the State school system. The Board's motives for mandating minimum competency testing were to provide a tool for measuring quality education and to create a curriculum designed to prepare students for their life roles.

Some resistance to minimum competency testing has been expressed by local school districts, but the concept has been generally accepted--probably because some districts were already engaged in and saw the value of competency testing prior to the State Board of Education's mandate. Perhaps another important reason seen by the Board of Education for this general acceptance of minimum competency testing was its decision to interpret broadly a "partnership" clause in the Utah Code. The State Board is to act as a facilitator and monitor of the minimum competency testing program, but the actual development and administration of the tests are to be left to the local districts.

Phase of implementation. The Board of Education has directed all local districts to establish minimum standards for high school graduation and to make provisions for evaluating student achievement of minimum standards by June of 1980. The standards are to include basic functional competencies in reading, writing, speaking, listening, computation (arithmetic), problem solving, democratic governance, and the consumption of goods and services (as well as a minimum number of units of credit). Districts may choose to test minimum competencies in other areas if they so desire. Districts can petition to extend the 1980 deadline, but 32 of the 40 districts will meet that date. Most districts have already begun to test their graduating classes prior to 1980.

Associated litigation. Since passing the minimum competency test does not become a graduation requirement until 1980, there has been no litigation. However, since Utah has tied successful demonstration of functional competencies to graduation, state and local administrators believe that legal problems may arise. These will probably be related to:

(1) Establishing curricular and instructional validity.

(2) Providing a sufficient period of time for remediation.

(3) Claims by minority students that the tests are discriminatory.

(4) Comparability of tests among districts.

(5) Claims by parents that they have been denied access to the test instruments.

(6) Failure to involve students and parents in item analysis and validation of the instruction instrument.

Goals and Purposes

General goals. The goal of Utah's competency program is to ensure that every individual will acquire the basic skills and understandings determined necessary to get by in life.

Specific purposes. More specifically, the aims of the program are to:

(1) guarantee that a student will not be graduated from the public school system without having acquired basic life competencies, i.e., the ability to read, write, speak, listen, compute, solve problems, understand the process of democratic governance, and and how to function as a wise consumer of goods and services;

(2) provide for early identification of each student's deficiencies and provide corrective measures;

(3) give assurance that educators have accepted accountability for teaching each individual the basic skills necessary to live in modern society.

Competencies

While local districts can elect to test other competencies as well, skills in the following categories are to be tested by all districts:

(1) reading;

(2) writing;

(3) speaking;

(4) listening;

(5) computation;

(6) problem solving;

(7) democratic governance;

(8) consumerism.

The State Board of Education selected the competency areas to reflect their view of what functions a high school diploma serves. Specifically, "the diploma . . . provides some assurance to the state and local communities that a new generation is equipped to assume the responsibilities of citizenship" (1977, p. 15), and "it should certify that the graduate . . . is competent in the basic skills, democratic processes, and problem solving at a level which will permit him or her to cope with everyday life and to learn job specifications . . ." (SBE, p. 15).

The State Board of Education appointed five subcommittees to develop specific objectives and performance indicators for the basic skill areas. Committee members consisted of local district representatives (teachers and some PTA members) and State Board staff members who were selected by the administrative staff of the State Education agency. The objectives these committees developed are samples only, designed to assist local districts in their implementation of the graduation requirements, and were issued in February 1978. Examples of the basic skills as applied to consumerism and democratic governance are presented in Table 1.

Standards and Standard Setting

While the State Board of Education mandated minimum competency testing as a graduation requirement, local districts set the actual standards for minimum competency. Many districts have developed their proficiency tests and administered them to samples of students prior to setting any passing standards. This field test data is then used to help set the passing score on the tests. Other districts experimented with having parents take the test to help set the passing score.

Target Groups and Testing Schedule

Local districts are to determine both what grades to test and when testing should occur in the school year. The State Education Agency has suggested that testing begin in grade 8 and continue every year through grade 12 in order to prepare students for successful completion of the competency test. Local school districts have generally accepted this suggestion.

TABLE 1

Basic Skills Related to Consumerism and Democratic Governance

Basic Skill	Consumerism	Democratic Governance
Reading	Reads and comprehends warranties, advertisements, contracts, etc.	Reads and comprehends newspapers, regulations, etc., at a level sufficient to participate in a democratic society
Writing	Writes letters, fills out applications, and conducts other purposeful written business correspondence with appropriate usage, spelling, punctuation.	Writes letters to the editor, congressmen and other citizenship-related material with appropriate usage, spelling, punctuation.
Speaking	Negotiates business transactions, expresses needs and conducts other consumer-related oral communications with sufficient clarity, volume and purpose.	Expresses views, questions officials, and conducts other citizenship-related oral communication with sufficient clarity, volume and purpose.
Listening	Listens and responds appropriately to commercials, instructions and other oral communication necessary as a consumer of goods and services.	Listens and responds appropriately to statements by elected officials, participates in a discussion and other citizenship-related oral communication.

TABLE 1 (continued)

Basic Skill	Consumerism	Democratic Governance
Computation	Performs consumer-related computations, e.g., warranty rebates, utility bills, etc.	Performs citizenship-related computations, e.g., effect of bond election, personal income tax, etc.
Problem Solving	Applies systematic problem solving process in finding solutions for consumer-related problems, e.g., choice of product or service.	Applies systematic problem solving processes in finding solutions for community problems, voting and other citizenship-related problems.

Test Instruments

The selection or development of the actual evaluation procedure is the responsibility of the local school boards. The following four basic approaches to selecting/developing test instruments are being used:

(1) local districts develop evaluation procedures by themselves or through consortiums;

(2) the districts use customized or ready-made, criterion-referenced tests that they purchase from test publishers;

(3) local districts use standard achievement tests supplied by the test publishers;

(4) evaluation instruments are developed by local school districts with consultant aid from national testing companies.

Test Administration; Scoring and Analysis; Reporting/Dissemination

As stated previously, the decisions regarding test administration, scoring and analysis, reporting and dissemination are made by the local school boards. What types of scores are reported, how much time is allowed for data analysis and interpretation, and what types of analyses and interpretation are done, therefore, depend upon each school district.

Use and Implications of Test Results

Consequences to students. Students who fail to complete the minimum competency standards set by the local school district cannot receive the standard diploma. These students may receive a "Certificate of Progress" which identifies credits earned and the student's level of competency achievement in basic skills. The Certificate of Progress allows the student to complete the minimum competency requirements at a later time, but provides a documented record of what basic skills have been acquired in high school.

The State Board of Education does not require a remediation program for students who fail to pass the competency requirements; however, it recommends it, and an informal survey indicates that all local districts plan a remediation program for students who fail one or more competency tests.

Consequences to programs. While the State Board of Education does not address the issue of the relationship of minimum competency standards to instructional programs, it is the opinion of State personnel assigned to implement the requirements that instructional programs have already been affected by competency testing. Their opinion is that the local school districts have implemented and used testing programs for years, and that the implementation of these minimum competency standards should have a direct impact on the school district curriculum programs.

Provisions for Special Populations

Students officially classified as handicapped (according to State rules and regulations) whose handicaps have direct bearing on their ability to take the test, are exempted from the testing program. All other decisions regarding special populations are left up to the local school districts. An informal survey by the staff indicates that most districts are initially exempting special populations from passing these minimum competencies. No attempts to translate the tests into Braille are presently known. Some districts are experimenting with translating the tests into special forms to allow for language and cultural differences.

Program Resources and Costs

General program staffing. While the responsibility for implementing the minimum competency testing program lies with the local districts, the State has actively provided technical support. The Steering Committee for Implementing Graduation Requirements has coordinated this technical support activity and also monitors local district compliance. A number of subcommittees have been formed to provide specific technical support in the content areas of reading, writing, speaking, and listening; computation; democratic governance; consumer skills; and problem solving. These subcommittees developed goals, objectives, and performance indicators that local districts can use. The State also offered several workshops to local district personnel on topics ranging from considerations relevant to measuring functional competencies to writing test items. The State Board of Education through its various divisions will continue to provide support to local school districts in the areas of how to write/define competencies; how to write test items; how to score tests; and how to process the data.

Several school districts have formed consortiums to help implement the minimum competency testing program. These consortiums share the tasks of developing/selecting competencies; writing/selecting test items; field-testing the test items; and processing the data.

Approximate costs and funding sources. The State Board of Education does not provide special statewide funding for the implementation of the minimum competency testing program. At both the State and local levels, resources being used were shifted from other programs. There is no information available about specific costs related to State or local district efforts.

Program Evaluation

The only evaluation function at the State level is to ascertain if the local districts are complying with the State mandate--i.e., whether they are assessing graduating students for achievement of the minimum competencies, and are setting standards for students to receive a regular diploma. The Committee for Implementing High School Graduation Requirements has developed an instrument which will be used for monitoring the local districts.

References

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VERMONT

Testing pupils for mastery of a set of State adopted objectives is only one component of Vermont's Basic Competency Program. The action taken by the State Board of Education in 1975 stipulated that, "Provisions shall be made, throughout the K-12 continuum so that ALL PUPILS have the opportunity to attain and maintain the BASIC COMPETENCIES" (SDE, 1977b, p. 61). Beginning with the class of 1981, students must show mastery of the adopted competencies in reading, writing, speaking, listening, and mathematics as one requirement for a high school diploma. The class of 1983 must also master basic competencies in reasoning as well as those in other areas in order to graduate from high school. An alternate graduation requirement may be provided for individual students found to have a limiting handicap. The purpose of the program is to ensure that all students have the opportunity to master and maintain the basic competencies.

There were 26 basic competencies in language arts and 25 in mathematics which were developed by the Department of Education and adopted by the State Board in July 1976. In January 1978, the Board adopted 15 basic competencies in reasoning that the Department had prepared. In the course of the development process, the Department submitted the basic competencies for review to citizens and educators across the state and field-tested them in selected districts. The 1977-78 school year was the first year of assessment.

Responsibilities given to local districts under this new policy include developing materials and procedures for instruction and assessment. The Department of Education has prepared sample materials for assessment and an individual Pupil Progress Record. Districts are required to use this or a similar, locally developed form, one per student, to record each student's progress with respect to the competencies. Following the first year of assessment, districts report results by age levels of students.

Legislative and Policy History

Policy history. According to the Department of Education, "The Basic Competency Program was developed in response to widespread concern on the part of colleges, employers, and the general public that students were not learning the fundamentals of reading, writing, mathematics, and reasoning"

(SDE, 1977b, p. 3). The requirement that students master specific skills in order to graduate from high school was incorporated into the school approval process by the State Board of Education in 1975.

The first link in the chain of events leading to changes in the school approval process occurred in 1971 when the Board of Education requested the Department of Education to prepare a proposal for school approval for all schools, K-12. In 1973 the Board passed a resolution to request that the Department review assessment procedures. The Board received both reports in 1974, and in 1975 developed a comprehensive proposal for public school approval. In 1975, the Board specified that schools could elect to remain subject to 1964 and 1968 Minimum Standards and Requirements, in effect until that time, but must also meet the requirements of two sections of the 1975 Public School Approval Process, or be subject to the new approval process in its entirety. Whichever option is chosen, schools must follow the requirements of two specific sections: the section on graduation requirements, and another entitled "Basic Competencies in the Enabling Skill Areas."

In listing graduation requirements, the Board stipulated that "The awarding of a DIPLOMA shall indicate achievement of FUNCTIONAL LITERACY IN THE ENABLING SKILL AREAS; effective beginning with the class of 1981" (SDE, 1977b, p. 62). The enabling skill areas were defined by the Board as reading, writing, speaking, listening, mathematics, and reasoning. Although the class of 1981 is to be the first group of students subject to these requirements, the Board further stipulated that assessment of students in the enabling skill areas was to begin once competencies in these areas had been developed by the State Department of Education and approved by the Board. The Board set the 1977-78 school year as the first year of assessment.

In these two sections, the Board charged both the State Department of Education and local districts with carrying out certain tasks. The Department of Education was to define the basic competencies and submit them for approval to the State Board by July 1976, to prepare Pupil Progress Record forms containing these competencies, and to make these forms available to local school districts. Local districts were given a number of tasks, which include: determining materials and procedures and the grade or level at which mastery of each competency would be expected; maintaining the Pupil Progress Records; identifying "pupils having difficulty in attaining and maintaining mastery of BASIC COMPETENCIES"; informing students of their progress in mastering the basic competencies through pupil-teacher conferences; and reporting information on pupil achievement to the Commissioner. The Board stipulated that the data are to be reported by age levels of students and that the Commissioner is to specify each year prior to September the assessment data which local districts must provide for that school year. The Commissioner is also required to report to the State Board of Education, the governor, and the Vermont legislature on the data obtained from the districts.

Phase of implementation. In 1976 the State Board of Education developed basic competencies in reading, writing, speaking, listening, and mathematics, and basic competencies in reasoning in 1978. Prior to their adoption, competencies in all areas had been reviewed by educators, citizens, and students throughout the State. During the 1977-78 school year, districts were responsible for developing assessment materials and procedures for testing every student on all the competencies, and for recording results on the Pupil Progress Records. In August 1978, each district reported to the State its total number of students by year of birth and the number of students by year of birth who had mastered each competency. During the 1978-79 school year, local districts used the results from the first year of testing to identify those areas in which students required remedial instruction. Administrators and teachers at the local level were also responsible for developing instructional materials and procedures for teaching the competencies.

In the 1978-79 school year the local districts continued with their instruction and assessment responsibilities, revising both the materials and procedures used in assessment and instruction as needed. For this second year of assessment the Commissioner required data only on students in the tenth grade, i.e., the class of 1981. Districts were to submit both the number of sophomores enrolled in their schools, and the number of sophomores who mastered each competency by August 1979.

In order to receive a high school diploma, all students in the class of 1981 must pass the basic competencies in the areas of reading, writing, speaking, listening and mathematics. Students in the class of 1983 are required to pass the basic competencies in reasoning, as well as in the other areas.

Goals and Purposes

General goals. The major purposes of the program are "to improve instruction for each student," and "to ensure that all pupils attain and maintain basic skills" (SDE, 1978, pp. 2, 7). The program is expected to achieve its goals by providing information of use to teachers, students, administrators at both the State and local levels, and legislators. Both teachers and administrators will use the information to identify students who experience difficulties in mastering and maintaining the basic competencies. Students can use the information to track their own progress with respect to the competencies. Administrators at the State level will utilize the results for the purpose of providing technical assistance to districts and in formulating policy. Legislators will use the data in preparing budgets and educational legislation.

Specific purposes. Results of the assessments will be used at the local level to determine where programs of study need modification in order to ensure that all students have the opportunity to attain and maintain these essential skills. In its 1975 policy statement, the State Board stipulated that one of the requirements for receiving a high school diploma, starting in 1981, will be mastery of basic competencies in the areas of reading, writing, speaking, listening, and mathematics. Students in the class of 1983 must master competencies in reasoning, as well as in the other areas. Another purpose of the program is to ensure not only that students demonstrate mastery of the basic competencies by graduation, but also that students maintain mastery. Thus, each student's Pupil Progress Record will indicate both the date at which the student demonstrated mastery of a specific competency, and the subsequent dates on which the student demonstrated that mastery had been maintained.

Competencies

There are basic competencies for each of the six enabling skill areas. There are 8 basic competencies in reading, 8 in writing, 7 in speaking, 3 in listening, 25 in mathematics, and 15 in reasoning. See Table 1 for a listing of all the basic competencies.

The competencies relate to a student's ability to complete tasks typically performed both in school and out of school. For example, the second basic competency requirement in the area of writing is, "Given a list of words which are commonly misspelled, the student will spell them with 80% accuracy" (SDE, 1977b, p. 7). In contrast, the seventh basic competency in writing requires a student to complete a task normally encountered outside of school: "Given directions to write a friendly letter, to fold it correctly, and to address the envelope, the student will do so, using correct form and having no more than two grammatical or punctuation errors" (SDE, 1977b, p. 7).

TABLE 1

Vermont's Basic Competencies in the Enabling Skill Areas

NOTE: "With 80% accuracy" means that the pupil will give the correct response on at least 80% of the examples given.

Reading

1. Given material written in manuscript and in cursive forms, the student will demonstrate ability to read both forms.
2. Given a list of high frequency words, the student will identify them with 80% accuracy.
3. Given a list of words vital to safety, including road and traffic signs, the student will identify them with 80% accuracy.
4. Given information material suited to the practical needs and interests of the student, the student will read the material and demonstrate ability to use such material by responding, in writing, with at least 80% accuracy to sets of questions based on at least three categories of these informational sources: the local newspaper; the Vermont Fish and Game laws; the Motor Vehicle Department Driver's Manual; first aid and safety handbooks; train, plane, and bus schedules; recipes.
5. Given unfamiliar material, the student will demonstrate ability to get pronunciation and meaning of new words by using word attack skills, structural analysis, and context.
6. Given directions to get specific information, the student will demonstrate, in writing, ability to use the library and resource material by responding with 80% accuracy to sets of questions in at least three of the following categories, one of which will be the library: dictionaries, telephone directories, encyclopedias, almanacs, library.

TABLE 1 (continued)

Reading (continued)

7. Given directions to read and summarize short factual articles, the student will respond by writing a brief summary which includes a main idea and at least three supporting statements.

8. Given material of his/her own choosing, the student will read aloud with clarity and emphasis, informally, to a small group.

Writing

1. The student will write all required material, including signature, legibly in manuscript and cursive.

2. Given a list of words which are commonly misspelled, the student will spell them with 80% accuracy.

3. Given material to copy, the student will do so with no errors or omissions.

4. Given directions to write a message related to his/her own interests and environment, the student will write a message that will be clear to the receiver and will contain no more than two grammatical or mechanical errors.

5. Given forms such as application blanks and order forms, the student will complete them correctly and neatly with no errors and with no omissions of essential information.

6. Given directions to write a friendly letter, to fold it correctly, and to address the envelope, the student will do so, using correct form and having no more than two grammatical or punctuation errors.

7. Given directions to write a business letter, to fold it and to address the envelope, the student will do so with no errors in form, grammar, or punctuation.

TABLE 1 (continued)

Writing (continued)

8. Given directions to select a topic of interest or importance to him/her, including personal opinion, to write in complete sentences, to use the dictionary as needed to check spelling, and to proofread carefully, the student will write one page of organized material with a total of no more than five errors in grammar, usage, spelling, and punctuation.

Speaking

1. Given a choice of familiar geographic locations, the student will give clear and accurate directions for reaching the selected location.
2. Given directions to explain a process, make a report, or express an opinion, the student will do so, demonstrating organization, sequence, clarity, and accuracy.
3. Given a simulated situation, the student will demonstrate ability to answer a business telephone correctly and to take a message.
4. Given a simulated situation, the student will demonstrate ability to get information or assistance by using the telephone.
5. Given simulated situations, the student will demonstrate ability to introduce himself/herself and others.
6. Given a job interview situation, the student will respond to questions about his/her qualifications, experiences, and interests and will ask relevant questions.
7. Given informal discussion situations, the student will participate, listening to others, making suitable responses, and speaking loudly and clearly enough to be heard by all with whom he/she is communicating.

TABLE 1 (continued)

Listening

1. Given oral directions to do a task involving at least three steps, the student will listen to the directions once and follow them with 100% accuracy.
2. Given a listening situation in which the student hears a story, he/she will retell the significant events sequentially, either orally or in written form.
3. Given a clear, concise oral presentation containing several important facts, the student will summarize orally or in written form the essential details of the presentation.

Mathematics

NUMERATION

1. Given directions to count to one hundred, the pupil will recite the numerals from one to one hundred in the usual order, with no mistakes.
2. Given orally numerals from one to one hundred, the pupil will write the corresponding arabic numerals, with no mistakes.
3. Given the arabic numerals from one to one hundred, the pupil will write the English word names, spelling with 80% accuracy.

MEASUREMENT

4. Given a clock face, the pupil will tell time accurately to the nearest minute, orally or in writing.
5. Given a Celsius scale thermometer or replica, the pupil will read the temperature accurately to the nearest degree.
6. Given a sample bar or line graph, the pupil will read and interpret.

TABLE 1 (continued)

Mathematics (continued)

7. The pupil will use the prefixes "centi", "milli", and "kilo" correctly when using metric units.
8. Given rulers in metric units, the pupil will measure lengths of objects between 10 and 100 centimeters to the nearest centimeter.
9. Given graduated containers in metric units, the pupil will measure amounts of liquid between 50 and 1000 millileters to the nearest 10 milliliters.
10. Given scales in metric units, the pupil will measure masses (weights) between 50 and 1000 grams to the nearest 10 grams.

MONEY

11. Given coins used in the United States, the pupil will name them and give their value in cents, with no mistakes.
12. Given oral directions to write specific amounts of money up to $999.99, the pupil will, using symbols, write those amounts of money, with 80% accuracy.
13. Given an amount of money and directions to make change from $10.00 ($1.00, $5.00), the pupil will find the correct change using actual coins or play money.

ARITHMETIC

14. Given the symbols +, -, x, and ÷, the pupil can identify the meaning by giving an example.
15. Given any two whole numbers from one to ten and instructions to add or state the sum, the pupil will give the correct response from memory, orally or in writing.

TABLE 1 (continued)

Mathematics (continued)

16. Given any two whole numbers from one to ten and instructions to multiply or state the product, the pupil will give the correct response from memory, orally or in writing.

17. Given at least four numbers, each with at least three digits and the decimal points in any position, the pupil will find their sum with 80% accuracy. The numbers shall not be given with the decimal points aligned, and the addition shall require carrying.

18. Given two numbers, each with at least three digits and the decimal points in any position, the pupil will find their difference with 80% accuracy. The numbers shall not be given with the decimal points aligned, and the subtraction shall require borrowing.

19. Given two numbers, each with at least three digits and the decimal points in any position, the pupil will find their product, with 80% accuracy. The multiplication shall require carrying.

20. Given a four-digit number and a two-digit number as a divisor, with the decimal points in any position in both, the pupil will find the quotient, rounded off to four digits, with 80% accuracy.

21. Given a three-digit number and percent to tenths with three digits, the pupil will find the percentage, with 80% accuracy.

22. Given proper fractions with denominators of 2, 4, 5, and 10, the pupil will give the equivalent decimal, with 80% accuracy.

23. Given proper fractions with denominators of 2, 4, 5, and 10, the pupil will give the equivalent percent, with 80% accuracy.

24. Given common fractions, the pupil will demonstrate an understanding of the meaning of the symbol to indicate division by showing which number is to be divided into the other.

TABLE 1 (continued)

Mathematics (continued)

25. Given the directions, "find 1/2," "find 1/3," "find 3/4," . . . "find 1/10," . . . of a whole number less than 100, the pupil will find the part, with 80% accuracy.

Reasoning

PROBLEM SOLVING

1. The pupil can observe and report data from an experience.
2. The pupil can identify the problem or issue presented in an experience.
3. The pupil can suggest possible causes of a problem.
4. The pupil can suggest some solutions to a problem.
5. The pupil can predict consequences of problem solutions.

CLASSIFYING AND ORGANIZING

6. The pupil can identify similarities and differences between items.
7. The pupil can put items into groups as described by others.
8. The pupil can put items into his/her own groups and explain the criteria used.
9. The pupil can put items into serial order.
10. The pupil can distinguish between statements of fact and statements of opinion.

TABLE 1 (continued)

Reasoning (continued)

MAKING REASONED JUDGMENTS

11. Given a dilemma situation, the pupil can take at least two positions and give reasons for each.

12. From a chart, graph, table, map, or list of facts, the pupil can state a summary or conclusion based on the data.

13. From a list of data and several possible conclusions, the pupil can identify those conclusions which could be validly drawn from the data.

RESEARCH SKILLS

14. The pupil can gather data on a given topic from at least three different sources.

15. The pupil can select and organize data on a given topic into a meaningful report.

The process of defining basic competencies in these areas actually began prior to 1975, when it was mandated by the State. Interested in defining the minimum skills that students graduating in Vermont should have, administrators in the State Department of Education, during the 1973-74 school year, began surveying educators throughout the State in order to gather suggestions for basic competencies in mathematics. In 1974 Department staff also requested teachers and administrators to propose basic competencies in language arts and reasoning. In addition to such surveys, the Department staff also reviewed similar objectives adopted by other States.

During the 1974-75 school year, curriculum consultants from the Department of Education worked with the mathematics teachers in one school district field-testing the competencies in this content area. Teachers developed both the assessment and instructional materials they needed in order to implement this pilot program. Teachers also used a prototype of the Pupil Progress Record as a reporting form. During the 1975-76 school years, teachers and administrators throughout the State field-tested competencies in all areas, again developing both materials and procedures for assessment and instruction, and determining when students would be tested. Over 200 teachers field-tested the competencies in mathematics and over 300 teachers field-tested the competencies in the areas of reading, writing, speaking, and listening.

After the Department made final revisions following the statewide review and field-testing, the Board of Education approved the basic competencies in reading, writing, speaking, listening, and mathematics. Basic competencies in reasoning were reviewed and field-tested in the same manner as the other competencies during the 1976-77 school year, and were adopted by the Board in 1978.

Standards and Standard Setting

For each competency a standard of mastery is prescribed by the State Department of Education. In the manual prepared for teachers and administrators on the assessment of basic competencies, the Department notes that "Mastery implies the ability to perform the Competency without review immediately preceding, without assistance, and without errors in excess of those indicated in the Competency Statement" (SDE, 1977b, p. 8). The standards range from 80% to 100% depending upon the competency. If, for a given competency, no standard of mastery is mentioned, the standard is assumed to be 100%. Thus, for example, the sixteenth basic competency in mathematics is as follows: "Given any two whole numbers from one to ten and instructions to multiply or state the product, the pupil will give the correct response from memory, orally or in writing" (SDE, 1977b, p. 58). Since no standard is mentioned, a student may not make any errors during the assessment; the third basic competency in mathematics, on the other hand, reads as follows: "Given the arabic numerals from one to one hundred, the pupil will write the English word names, spelling with 80% accuracy" (SDE, 1977b, p. 54). The Department of Education standard of 80% accuracy means that the pupil must answer correctly at least 80% of the examples. The number of examples to use for any given assessment is a local decision.

There are 17 competencies with an 80% standard of mastery. According to the Department, the assignment of a standard depends upon the kind of competency being measured. That is, in cases where a competency measures a student's command of a process, e.g., the process of writing Arabic numerals (see the third basic competency above), administrators hold that a student could make a small error without jeopardizing his/her claim to mastery of the competency. Such errors could be assumed to result from inattention or carelessness rather than a skill deficiency. In contrast, other competencies that measure facts, rather than processes, have a 100% standard of mastery.

The standards were developed in conjunction with the competencies and hence were subject to the same review process as the competencies. This process included review by Vermont teachers across the State in regional meetings, and field-testing in classrooms during the 1974-75, 1975-76, and 1976-77 school years.

Target Groups and Testing Schedule

The State does not prescribe at what grades testing of the basic competencies is to occur. The policy passed by the Board states that all students in the class of 1981 must demonstrate mastery in the competency areas of reading, writing, speaking, listening, and mathematics in order to receive a high school diploma, and that the class of 1983 must meet additional competency requirements in reasoning. Thus, local districts may decide when students will be assessed.

The State Department of Education recommends that school systems prepare a curriculum guide that indicates when "skills related to the competencies are introduced, practiced, tested, and reviewed as needed" (SDE, 1977b, p. 18). Some school systems have used the curriculum guide in deciding when to begin testing students on the various competencies.

Administrators can estimate, for example, the point at which a student is likely to have acquired proficiency by taking into account the grade or level at which a skill is introduced. Thus, target groups for testing vary according to school districts.

Similarly, the State does not specify a testing schedule. Since the intent of the program is to ensure not only that students have mastered specific competencies, but also that they maintain proficiency, the State encourages the local districts to retest students periodically once they have demonstrated mastery. Thus, local districts not only determine the testing schedule for the first assessments, but also for repeated assessments, both for students who have failed the first assessments and for students who are expected to maintain mastery.

Test Instruments

The Vermont basic competency program does not use any one test instrument throughout the State. Test instruments are developed locally and range from standardized, off-the-shelf tests, to teacher-made or division-developed tests. According to the Director of the Division of Elementary and Secondary Education of the Department of Education, many local districts do not use traditional paper-and-pencil tests. The State Department acknowledges that "the skills to be mastered are the same for every pupil in the state, but there is some variability in the way they are learned and measured."

The Department does offer the following recommendations to local districts on the development of assessment materials: "The materials used for assessing mastery should be agreed upon system-wide in order to provide for comparable materials for all pupils rather than having various grade levels fixing their own standards for mastery, though each grade level may well have its own material for assessing pupil progress in the Competency. Several items for assessing each Competency should be developed so that, as the pupil needs to be re-checked, there is a different item from the one used previously, especially if the pupil has had access to the results of his/her previous work" (SDE, 1977b, p.18).

Although local districts develop their own assessment materials and procedures, the Department of Education does publish guides for teachers and administrators, which include sample strategies for teaching all of the basic competencies as well as sample assessment materials. Staff members from the Department also provide technical consulting assistance to local districts.

Scoring and Analysis

All scoring of assessments is done at the local level. Local districts determine who will score the assessment.

Test results are reported on a pass/fail basis. For the first year of assessment, 1977-78, the Commissioner required that districts report both the number of students taking each assessment by year of birth and the number of students who have mastered each competency. Charged by the State Board of Education to develop a form for reporting the outcomes of assessments, the State Department of Education prepared the form for the Pupil Progress Record. Local districts are required to keep a Pupil Progress Record for each student. The Record indicates the date on which the student first mastered the competency. If a student is subsequently tested and does not demonstrate proficiency, the entry denoting the date is to be erased, according to the State Department of Education (SDE, 1977b, p. 12). Alternatively, the Record indicates the subsequent dates on which the student demonstrated the maintenance of proficiency in a basic competency.

Reporting/Dissemination

In the section on basic competencies adopted by the State Board of Education in 1975, the Board specified that each Superintendent must "supply the Commissioner with a report containing information about pupil achievement within ENABLING SKILL AREAS" (SDE, 1977b, p. 61) for the first year of assessment and every year thereafter. The Board also stipulated that assessment results be reported by age levels of students and that the Commissioner announce "prior to September of the reporting year" (SDE, 1977b, p. 61) what data the local districts must submit to the Department of Education by the following August.

Following the first year of assessment (the 1977-78 school year), all local districts reported the total number of students by year of birth, and the number of students, also by year of birth, who had mastered each competency. For the 1978-79 school year, local districts are required to submit the same information for members of the class of 1981 only, since this is the first group of students subject to the graduation requirements adopted by the Board in 1975. For both the 1977-78 and 1978-79 assessment years, data were reported for competencies in all areas except reasoning. Competencies in this area were not approved by the Board until January 1978, and during the 1978-79 school year, the Department of Education was developing sample assessment and instructional materials.

Under the policy adopted by the State Board, local school districts are required to record each student's mastery of the basic competencies on the Pupil Progress Records. The Board stipulated that districts must inform students when they have demonstrated proficiency in all the competencies for a given area: "At this time, a pupil-teacher conference will be scheduled for the purpose of informing the student of his/her achievement" (SDE, 1977b, p. 61).

Other than in the provisions discussed above, the Board did not address itself to the reporting of assessment data. Hence, local administrators have the responsibility for determining what kinds of information will be reported to other personnel in the district.

Use and Implications of Test Results

Consequences to students. Beginning with the class of 1981, a student who fails to master the competencies will not receive a high school diploma. Beginning with the class of 1983, students must master the competencies in reasoning, as well, in order to graduate. All decisions concerning remediation afforded to students who fail competency assessments are made at the local level.

Consequences to programs. The State does not require that local school districts alter their programs as a result of the assessment data. Nonetheless, the Department anticipates that local administrators will "use the data to evaluate their school's programs, develop appropriate modifications and activities, and allocate resources to overcome weakness and to support areas of strength" (SDE, 1978, p. 3). The Department also suggests that "the data can be used to assist in the development and justification of local school budgets" (SDE, 1978, p. 3).

Provisions for Special Populations

The graduation requirement that all students master basic competencies in the five areas, beginning with the class of 1981, and in the area of reasoning, beginning with the class of 1983, applies to all students, including transfer students and those with handicaps identified in accordance with Public Law (P.L.) 94-142. Transfer students must be informed of the requirements and assessed along with other students. With respect to handicapped students, the Board of Education recognized that there may be some pupils with "a limiting handicap which prevents them from meeting some specific local graduation requirement and/or mastering some specific Basic Competency" (SDE, 1977a, p. 63).

For such pupils local districts are required to do the following:

(1) prepare an individual plan, as required under P.L. 94-142, that "will include a component explaining the exception to the local graduation requirement and/or Basic Competency, and any alternative requirement designed for the pupil" (SDE, 1977b, p. 63).

(2) Prepare a "comprehensive multi-year plan as approved by the Local Board and the Commissioner of Education" (SDE, 1977a, p. 62).

The primary difference between the two plans is that the multi-year plan is, as its title implies, a long-range plan intended to anticipate the student's progress with respect to all of the basic competencies and the possible obstacles to mastery that a handicap will present. In cases where a handicap clearly precludes the student from meeting the competency requirement, the local school district must formulate alternative requirements--e.g., by designing other ways of assessing the student in a skill area, or by substituting a requirement that takes the handicap into account. The Department provides the following example: "A pupil with a sight loss might not be able to demonstrate the ability to read manuscript and cursive writing, as in the Reading Basic Competency 1. The plan for such a pupil might include the ability to read Braille as a logical substitute" (SDE, 1977b, p. 64).

Qualified local personnel (e.g., special education teachers) are to prepare the comprehensive multi-year plans. Each plan must be approved by the local Board of Education and by the Commissioner.

Program Resources and Costs

General program staffing. Vermont's basic competency program is run by the Commissioner of Education, the Board of Education, and the Department of Education, in particular the Division of Elementary and Secondary Education. The policy-making body has been the Board of Education, whose decisions have the effect of law. The Commissioner and the Department of

Education administer the program on the State level. Most of the program functions at the local level, however, and the State acts in a supervisory or advisory capacity.

According to the Director of the Division of Elementary and Secondary Education, the exact size of the program staff is difficult to determine, since the Department of Education staff members who work on the basic competency program have overlapping responsibilities. However, the Department recently hired content specialists to provide assistance to local school districts. In addition, the consultants meet weekly with the Director of the Division of Elementary and Secondary Education.

Approximate costs and funding sources. Information on the cost of the program is not available. The operation cost of the program at the State and local levels is embedded in the cost of the ongoing curricular activities of teachers and administrators, funded from local and State resources.

Program Evaluation

In view of the latitude given to local districts under the policy on basic competencies adopted by the Board of Education in 1975, administrators in the State Department of Education are particularly interested in the consistency of judgments of mastery and in the comparability of assessment materials used in school districts. During the 1977-78 school year, the Department of Education conducted two studies: one to determine "whether or not the data gathered by school districts is reasonably consistent with the findings of another reviewer using the same materials and, as far as possible, the same assessment methods"; and the other to investigate the "extent to which the approaches used by different localities are comparable" (SDE, 1978, p. 3).

To test the consistency of the data, the Department of Education tested 3,202 students on selected competencies. These 3,202 students were divided into eight groups, with each group numbering at least 350 in order to ensure representativeness. All students were in the ninth grade and, hence, members of the first class subject to the graduation requirements. According to the Department, schools and students were selected for the study in the following manner: "The schools involved were randomly selected from each of the five regions into which the state is divided for educators' group meetings. The minimum number of students to be reviewed per region was determined as a proportion of the ninth-graders in that region to the total number needed state-wide. As a result of the random selection, two schools in one region were involved; in the other regions there were sufficient ninth-graders in the school selected so that only one school was involved" (SDE, 1978, p. 4).

The competencies to be reviewed were selected on the basis of a variety of considerations, including how long it would take to administer, score, and record the assessment, and whether ninth-graders could reasonably be expected to have mastered the competency. Of the eight competencies selected, one was in reading, one in writing, one in speaking, one in listening, and four in mathematics. Staff members from the State Department of Education conducted both a pilot review and the actual review. The pilot review consisted of assessing over 200 eighth-, ninth-, and tenth-graders in three districts on the selected competencies and afforded reviewers the opportunity to practice assessment techniques. In May 1978 staff members conducted the actual review, going to the local districts and assessing students using the materials from the districts. Reviewers recorded the data on index cards. Each card contained the following information: the student's year of birth, the competency being assessed, the outcome of the local assessment (i.e., whether or not the student had demonstrated mastery), and the outcome of the reviewer's assessment. It was found that the percentage of instances in which the local and State reviewers agreed that a student had or had not demonstrated proficiency ranged from 59% for Reading Competency 16 to 85% for Mathematics Competency 16. The overall agreement, based on averaging the percentages of instances in which the reviewers agreed for all eight competencies, was 69%.

The Department of Education also conducted a Comparability Study to determine "the extent to which the approaches used in assessments in various school districts were comparable" (SDE, 1978, p. 5). Data for this study consisted of assessment materials and procedures used in the six schools that participated in the Review Study. Hence, this data was collected concurrently with that gathered for the Review Study, and is based on the same competencies. Department of Education staff compared the local materials and procedures with the guidelines and sample materials on the assessment of basic competencies issued by the Department. The comparisons consisted of rating the local materials on whether for each competency they were above the level, in agreement with, or below the level "most closely associated with the wording of the Competency and the material in the State Manual" (SDE, 1978, p. 6). The Department described the variations found in comparing the schools' approaches to assessment: "Some had attached specific time requirements for the completion of the task while others had not. Some used group situations for all of the competencies reviewed, while others used some individual assessment. Some schools used the same methods throughout the school, while others left the method up to individual teachers. Some had very specific guidelines for evaluation, while others left the standards to individual teachers" (SDE, 1978, p. 7).

In reviewing the findings of these two studies, the Department concluded that, given the extent to which the assessment materials and procedures varied among school districts, "a close statistical analysis" of the data from the first year of assessment "would not be appropriate" (SDE, 1978, p. 7). Nonetheless, the Department did find that the information was being used constructively at the local level both to identify pupils in need of assistance with specific competencies, and to furnish opportunities for such assistance.

Future Directions

Over the next five years the Department of Education will be involved in several activities that may lead to changes in the program. In particular, the Department will be encouraging local districts to have students develop career plans, and anticipates the possibility of adding competencies related to career education to the basic competencies now assessed. The Department is also planning to provide more preservice and in-service training for educators on the topic of assessing and teaching competencies.

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SOUTH BURLINGTON, VERMONT

Local districts in Vermont are required by action of the State Board of Education in 1975 to assess all students in basic competencies in reading, mathematics, listening, speaking, writing, and reasoning. Beginning with the class of 1981, all students must master competencies in the first five areas in order to receive a diploma, and beginning in 1983, students must master competencies in reasoning as well in order to graduate. The State has prescribed both the competencies and a standard of mastery for each competency. Local districts are responsible for determining how and when to assess students. The testing instruments developed by teachers and administrators in South Burlington have also been used in other districts in the State. In South Burlington the assessments are administered at the middle and high school levels in specially created "mentor groups." The testing schedule was determined by reviewing the curriculum and estimating when mastery with respect to each competency could be expected to occur. Under the policy adopted by the State Board of Education, local districts are expected to assess pupils to ensure both mastery and maintenance of the competencies. Therefore, in South Burlington, competencies are assessed both at the points where mastery is expected to occur and periodically thereafter as a student progresses in school.

Legislative and Policy History

Policy history. The assessment of basic competencies in South Burlington began in response to a policy adopted by the State Board of Education in 1975. In 1975, the State Board of Education introduced a new school approval process that contained two sections, one relating to basic competencies in the areas of reading, writing, mathematics, listening, speaking, and reasoning, and the other relating to graduation requirements. The Board of Education stipulated that if local districts chose to remain subject to the old school approval requirements, they must adhere to the requirements contained in the two sections mentioned above; alternatively, districts could elect to meet the requirements of the new approval process in its entirety.

In these two sections on basic competencies and graduation requirements, the Board required that all students master the basic competencies in reading, writing, mathematics, speaking, and listening in order to receive a high school diploma, beginning with the class of 1981. Moreover, the class of 1983 must meet competency requirements in the area of reasoning as well, in order to graduate. The major purpose of the program is to "ensure that all pupils attain and maintain these basic skills" (SDE, 1978, p. 7).

In its policy statement, the Board also assigned certain responsibilities to the Vermont Department of Education and to local districts. The Department of Education was required to develop competencies in the areas of reading, writing, mathematics, listening, and speaking, and to submit them to the Board by July 1976. In July 1976 the Board adopted the competencies in these areas. In January 1978, the Board adopted competencies in reasoning, also prepared by the Department of Education. Under the policy adopted in 1975, the Board gave the following responsibilities to local school districts: to develop assessment instruments and procedures for all the competencies, to determine when students would be assessed, to develop materials and procedures for teaching the skills tested by the competencies, and to report the results of assessments to the Commissioner. Local school districts are also required to notify students when they have mastered all the competencies in a given area and to record students' mastery of the basic competencies using the Pupil Progress forms developed by the Department of Education. The Board stipulated that districts were to first assess students during the 1977-78 school year.

Phase of implementation. During the summer of 1977, teachers and administrators in South Burlington prepared materials and procedures for assessing students on basic competencies in the areas of reading, mathematics, listening, speaking, and writing. Prior to this, in January 1977, teachers and administrators had developed a curriculum guide indicating when each competency was introduced and when a student could be expected to have mastered it. Administrators in South Burlington used this guide in determining what grades to assess on specific competencies during the 1977-78 school year. After the first year of assessment, the Superintendent sent the results to the Vermont Department of Education.

In South Burlington, results from the first year of assessment were also given to teachers and department chairpersons. Administrators requested that they use the information to locate weaknesses in the curriculum and make necessary changes.

During the second year of assessment, the 1978-79 school year, administrators and teachers again assessed students and used the results to review the curriculum. For this second year the Commissioner requested the assessment results for sophomores only--i.e., for members of the class of 1981. This group is of interest because it is the first class subject to the competency requirements adopted by the Board in 1975.

Goals and Purposes

The statewide goal of Vermont's basic competency program is to help teachers ensure that all pupils have the necessary opportunities to master and maintain mastery of the skills involved.

In addition to this goal, administrators in South Burlington selected a procedure for administering the assessments that is intended to provide opportunities for students to develop ongoing relationships with staff members and peers.

Competencies

In 1976 the State Board of Education adopted basic competencies in reading, mathematics, listening, writing, and speaking, and, in 1978, in reasoning. All districts in Vermont assess the same basic competencies, which were prepared by the Department of Education. Beginning in 1973, curriculum consultants from the Department began surveying educators and citizens in Vermont in order to gather suggestions for basic competencies in mathematics. In 1974 consultants also requested members of these same groups to nominate basic competencies in language arts and reasoning. Staff from the Department also reviewed competencies assessed in other states.

During the 1974-75 and 1975-76 school years, teachers across the State field-tested the competencies in all areas except reasoning. They developed materials and procedures for assessing the basic competencies. The Department of Education then revised the competencies and submitted them to the Board for approval in 1976. Basic competencies in reasoning were field-tested using similar procedures during the 1976-77 school year; they were then submitted to the Board in 1978.

There are 66 basic competencies: 8 in reading, 8 in writing, 7 in speaking, 3 in listening, 25 in mathematics, and 15 in reasoning. The competencies consist of tasks that students encounter both in school and outside of school. For example, the fourteenth competency in mathematics requires that, "Given the symbols +, -, x, and , the pupil can identify the meaning by giving an example" (SDE, 1977, p. 9). The thirteenth competency deals with using money: "Given an amount of money and directions to make change from $10.00 ($1.00, $5.00), the pupil will find the correct change using actual coins or play money" (SDE, 1977, p. 9). Competencies are listed in the description of the State program (see Minimum Competency Testing in the State of Vermont, NES, 1979). For a listing of when a student is expected to have mastered each competency, see Table 1.

TABLE 1

First Assessment of Competencies

In South Burlington, the basic competencies are first assessed at the grade when mastery is expected to occur, except in instances where classroom teachers believe that there is a reasonable expectation of mastery at an earlier time. A student is also assessed on the same competencies periodically thereafter in order to ensure maintenance of the skills.

Competencies*	First Assessment Administered in Grade:
READING	
1. Reads manuscript and cursive writing	3
2. Identifies high frequency words	2
3. Identifies words vital to safety	3
4. Reads, uses information material	10
5. Gets pronunciation, meaning of new words	9
6. Gets information from resource material	5
7. Finds main idea and supporting details	8
8. Reads aloud with clarity	3
WRITING	
1. Writes legibly in manuscript and cursive	3
2. Spells common words correctly	10
3. Copies material accurately	4
4. Writes a clear message	8
5. Completes blanks and forms	10
6. Writes a friendly letter	7
7. Writes a business letter	11
8. Writes a page of organized material	10

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* Vermont's basic competencies are summarized below. For a complete statement of each competency, see SDE, 1977, pp. 6-10.

TABLE 1 (continued)

Competencies	First Assessment Administered in Grade:
SPEAKING	
1. Gives clear directions	7
2. Explains a process, makes a report, or expresses an opinion	8
3. Answers the phone and takes a message	6
4. Gets information and assistance by phone	6
5. Introduces himself/herself and others	6
6. Participates in a job interview	10
7. Participates in discussion	5
LISTENING	
1. Follows directions	4
2. Retells events sequentially	6
3. Summarizes oral presentations	8
MATHEMATICS	
1. Counts to 100	2
2. Writes numerals to 100	2
3. Writes numeral names	8
4. Tells time	4
5. Reads the thermometer	3
6. Interprets a bar graph	3
7. Uses metric prefixes	8
8. Measures length	3
9. Measures capacity	6
10. Measures mass	7
11. Names and values coins	2
12. Writes amounts of money	4
13. Makes change	7
14. Identifies +, -, x, ÷	5
15. States addition facts	4

TABLE 1 (continued)

Competencies	First Assessed Administered in Grade:
16. States multiplication facts	5
17. Finds sums	6
18. Finds differences	6
19. Finds products	7
20. Finds quotient	8
21. Finds percents	8
22. Finds equivalent decimals	8
23. Finds equivalent percents	8
24. Shows fractions as division	6
25. Finds fractional parts	7

(N.B. The competencies in reasoning are not listed since they were adopted in January 1978 and will be assessed for the first time during the 1978-79 school year. South Burlington administrators are in the process of determining at what grades these 15 competencies will be assessed.

Standards and Standard Setting

Mastery levels for the basic competencies have been adopted by the State Board of Education. The process of defining standards occurred simultaneously with the development of competencies, since a standard for mastery is prescribed for each of the 66 basic competencies. Standards range from 80% to 100%.

Unless otherwise stated the standard of mastery is 100%. Of the 66 basic competencies, there are 17 for which an 80% standard of mastery is prescribed. The Department defines this standard as follows: "'With 80% accuracy' means that the pupil will give the correct response in at least 80% of the examples given" (SDE, 1977, p. 9).

The standards, like the competencies, were reviewed by Vermont educators and citizens and were field-tested in classrooms during 1974-75 and 1975-76. Standards for the basic competencies in reasoning were also field-tested simultaneously with the competencies during the 1976-77 school year.

Target Groups and Testing Schedule

In the policy adopted in 1975, the State Board of Education did not specify at what grades students were to be assessed on the basic competencies, nor did it mandate a testing schedule.

Hence, local districts were given the task of identifying what grades should be assessed on which basic competencies. South Burlington administrators decided to begin assessing students on a given competency at the point at which a student could reasonably be expected to have mastered the competency. In order to estimate these points for the various competencies, administrators and teachers during the fall and winter of the 1976-77 school year reviewed the curriculum to determine at what grades instruction in all of the basic competencies first begins. Language arts teachers were divided into committees representing the elementary, middle, and high schools, while mathematics teachers were also organized in the same manner. These committees reviewed the language arts competencies (i.e., the basic competencies in the areas of reading, writing, speaking, and listening) and the mathematics competencies to determine the grade levels at which competencies were first introduced and the grade levels at which a student could be expected to demonstrate mastery.

During the 1977-78 school year, students were assessed on all the competencies they were expected to have mastered at their particular grade level. For a listing of the competencies and the grades at which they are first assessed, see Table 1. In the fall of 1977, principals at all three levels received the assessment materials. Administrators reviewed the responsibilities given to local districts under the 1975 Board policy, and requested that principals return the results of the assessments by May 1978. Hence, individual schools had latitude with respect to preparing a schedule for assessments.

Test Instruments

The committee developed a test for each competency in the areas of reading, mathematics, listening, speaking, and writing. Each instrument is designed for the grade at which mastery of the particular competency is expected, and depending upon the competency, the test may have both a written and an oral component. In preparing test instruments, committee members restated each basic competency in order to indicate the nature of the assessment as well as the standard of mastery.

Thus, for example, the fifth basic competency in mathematics is, "Given a Celsius scale thermometer or replica, the pupil will read the temperature accurately to the nearest degree" (SDE, 1978, p. 24). The committee rewrote this competency as follows: "Given 5 examples on Celsius thermometers or a facsimile, the student will tell the temperature in writing with appropriate symbols with 80-100% accuracy (1 error) within 5 minutes" (South Burlington, 1977). For examples of the rewritten competencies, see Table 2.

The committee also determined that mastery of this competency could be expected by the third grade and decided to assess it using reproduced sketches of thermometers and requiring the student to respond both orally and in writing. In the assessment of this competency, third-graders are presented with five sketches of thermometers and asked to write the correct temperatures using appropriate symbols. The student is also asked, after responding in writing, to tell the teacher administering the assessment what temperature is indicated on each of the five thermometers. A student must pass both sections in order to demonstrate mastery. In devising this assessment, the South Burlington committee also decided to impose a time limit on the written section and require each student to complete it within five minutes. Time limits are also imposed on assessments of some other competencies. The committee developed from three to five forms for each instrument, and also prepared directions to the administrator for each test.

TABLE 2

Examples of Competencies Prepared by the South Burlington School District

Reading

1. Given a 100-150 word passage at the student's approximate reading level, in both cursive and manuscript form, the student will orally read the passage with no more than 10 errors within 5 minutes.

5. Given a passage of approximately 100-200 words of unfamiliar reading material, with a grade level within 6.5-7.0 range, and with 5 words underlined for context definition, the student will orally read the passage, and orally define the underlined words, with no more than 5 errors in pronunciation per 100 words, and with 80-100% accuracy for word meaning.

8. Given directions to orally read material which has been chosen by the student, the student will read the material aloud, for 3 minutes, with clarity and emphasis to the satisfaction of the teacher.

Writing

1. Given assignments of at least 25 words to write in manuscript and in cursive, the student will complete the assignments and write his/her signature so that they are legible to the instructor.

5. Given an application form and an order blank, the student will complete the forms, according to the directions, neatly, accurately, and legibly.

8. Given directions to choose a topic, and to write a one-page composition with the use of a dictionary, the student will write the composition with proper paragraphing, with complete sentences, with a logical arrangement of ideas and facts, containing no more than 5 errors in grammar, usage, spelling and punctuation, so that it is legible to the evaluator.

TABLE 2 (continued)

Speaking

1. Given a worksheet with familiar geographic locations, the student will choose one and orally give specific directions to the location with clarity, organization, and simplicity to the satisfaction of the evaluator.

5. Given a worksheet with 3 categories for making introductions, each containing a variety of options, the student will choose one option from each category, simulate the situation, and perform the introduction with ease, using complete names, titles and/or positions where appropriate to the satisfaction of the evaluator.

Listening

1. Given oral directions, read once by the teacher, to do a three (3) step task, the student will listen to the directions and follow them by accurately completing the task to the satisfaction of the evaluator.

Mathematics

1. Given a grid of 100 squares, the child will write the numbers 1-100, in sequence, with 100% accuracy (0 errors) within a half hour. Given the directions to count from 1 to 100, the student will count orally, in sequence, with 100% accuracy (0 errors) within 5 minutes.

5. Given 5 examples on Celsius thermometers or a facsimile, the student will tell the temperature in writing with appropriate symbols (and orally) with 80-100% accuracy (1 error) within 5 minutes.

TABLE 2 (continued)

Mathematics (continued)

8. Given a meter stick, the student will measure and record the lengths of 5 objects between 10 and 100 cm. to the nearest centimeter, using the correct abbreviation, with 80-100% accuracy (1 error) within 15 minutes.

15. Given 25 addition facts, the child will write the answer with 80-100% accuracy (5 errors) within 3 minutes.

25. Given 5 problems with directions to find the fractional part of a whole number less than 100 (proper fractions will be used and answers must be whole numbers), the student will write the answers with 80-100% accuracy (1 error) within 10 minutes.

Since the adoption of the South Burlington basic competency program, the Department of Education has suggested that time limits be used as guides and not as a penalty if mastery is accomplished in a longer time. South Burlington administrators have accepted this suggestion, and, as a result, if a student exceeds a time limit, but demonstrates proficiency during assessment, the student has then mastered a basic competency.

There was no formal field-testing of the test instruments. At the beginning of the 1977-78 school year, principals were given the assessment materials and asked to return the results in May 1978. The district's policy was to encourage teachers to test all students on all the competencies in reading, writing, speaking, listening, and mathematics, except in instances where a teacher believed a student had not yet mastered the competency. In order to decide which competencies to assess at a given grade level, school administrators used the curriculum grade to determine all of the competencies a student could be expected to have mastered by that grade level. Thus, for example, in mathematics, according to the guide, fourth-graders could be expected to have mastered the ability to tell time (the fourth basic competency), as well as the ability to read a thermometer (the fifth basic competency). See Table 1 for a complete listing of the grade levels at which the competencies are first assessed. Hence, fourth-grade students were assessed during the 1977-78 school year on both these competencies. Similarly, for all other grades, students were assessed on both the competencies for which mastery was expected at their current grade level as well as on those mastered in earlier grades. To test a competency a student was supposed to have mastered in an earlier grade, teachers used the instrument developed to assess the competency at that earlier grade level. Thus, for example fourth-graders were assessed on the ability to read a thermometer using the same test developed for third-graders. The thermometer sketches were used to assess this competency in all of grades 3-12.

Some revisions in the forms were made following the first year of testing. The State, for example, was concerned that the added stipulations governing administration (e.g., time limits, requiring both written and oral responses) raised the level of the competency above that intended by the State. As a result, test forms were altered to include both the competency as specified by the State and the version prepared by the committee.

During the 1978-79 school year an additional form for each instrument was developed by teachers and administrators. The district's policy is to encourage teachers to reassess students on competencies they have already mastered using different forms of the same instruments. During the latter half of the 1978-79 school year, teachers and administrators have been developing instruments to assess the competencies in reasoning, and plan to begin testing during the 1979-80 school year.

Test Administration

The State Board of Education did not specify who should administer the assessments or how they should be administered, and, hence, local districts are responsible for making these decisions.

Early in the fall of 1977, the principals from the middle and high schools jointly proposed administering the tests in specially created "mentor groups." They saw one major advantage of administering the assessments in small groups: mentor groups would provide students with ongoing relationships with adults--i.e., the mentors or assessment administrators--and peers. Both classroom teachers and administrators would serve as mentors.

The chief administrators in the district accepted the proposal, and in the fall of 1977 assigned middle and high school students to groups. At the high school level, each classroom teacher and administrator was randomly assigned approximately 16 students, four from each grade level. Also serving as mentors in the high school, the Superintendent and Assistant Superintendent were each assigned eight students, or two from each grade. During 1977-78, the first year of assessment, each group met twice a week with its mentor. During the 1978-79 school year mentor groups met once a week. The mentor is responsible for assessing all the students on the basic competencies they are expected to have mastered at their grade level. In addition to testing for mastery, the mentor also retests students on competencies they have already mastered in order to ensure that they maintain the skills.

Mentors are, in turn, assigned to counselors in their respective schools. The six counselors, four of whom are in the high school and two in the middle school, are assigned 12 mentors each. If a mentor has difficulty in understanding the intent of the competency or in administering the assessment, he or she can go to the counselor for assistance.

Administrators in South Burlington point out that the mentor plays a role similar to the one traditionally filled by the homeroom teacher. A student will be a member of the same group throughout the middle and high school years. Hence, the potential for developing an ongoing relationship with a faculty member is present, much as it was when students were assigned a homeroom advisor. Since teachers in grades K-6 administer the assessments in the classroom, opportunities for such ongoing relationships already exist; therefore, the concept of mentor groups was not introduced into these grades. Rather, in grades K-6, classroom teachers are responsible for assessing students on all the competencies.

Scoring and Analysis

Each assessment of basic competency is scored by the mentor for middle and high school students, or by classroom teachers for students in grades K-6. If a student has demonstrated mastery, the date of the assessment is entered onto the student's Pupil Progress Record. If a student demonstrates mastery when retested on the same basic competency, the date is also entered. If a student fails to demonstrate proficiency when retested, the original date on which he demonstrated proficiency is erased, and the student must show mastery again before the Record indicates mastery.

Reporting/Dissemination

In August 1978, the State Department of Education collected from South Burlington, along with every other school district in the State, the following information, which was broken down by student age group as determined by date of birth:

(1) number in group;
(2) number and percent mastering each competency;
(3) number needing remediation;
(4) percentage not mastering the competencies;
(5) percentage not assessed, e.g., because of absence, etc.

The State provided the recording forms to the local school districts, which filled them out anonymously.

The State requires that local districts adopt a policy regarding what assessment results they will and will not release. The South Burlington School Board voted to release all information except that which, in the judgment of the Superintendent, might violate the privacy of the students (i.e., if a student could be identified by the information released). In September 1979, local newspapers published results for individual towns.

The administration shared the 1977-78 results with all teachers and department chairpersons as a means of encouraging them to strengthen weak spots in the curriculum as indicated by the test results. Reporting within the school consists, as already mentioned, of keeping a state-supplied

Pupil Progress Record which lists all competencies, the dates assessed, outcomes, and dates when skills are assessed again to ensure their maintenance.

For the 1978-79 school years, districts were required to report results only for members of the class of 1981.

Use and Implications of Test Results

Consequences to students. By State mandate, any South Burlington students who have not mastered the competencies in reading, writing, listening, speaking, and mathematics by 1981 will not receive a high school diploma. By 1983, all South Burlington students who have not mastered the additional competencies in reasoning, along with those already mentioned, will not receive their diplomas.

Mentors may provide some remediation or consult with the designated guidance counselor as to the best type of remediation to offer. In turn, the mentor may contact the classroom teacher to provide remedial help.

Consequences to programs. There are no mandated consequences to programs under the policy adopted by the State Board of Education in 1975. As mentioned above, in South Burlington the results of the 1977-78 assessment were presented to teachers and department chairpersons, who were urged by the administration to locate weak spots and change curricula where necessary.

Provisions for Special Populations

In its 1975 policy, the Board specified that all students, beginning with the class of 1981, must meet competency requirements in the areas of reading, mathematics, writing, listening, and speaking in order to receive a high school diploma. The class of 1983 must master competencies in reasoning as well, in order to graduate. The Board did stipulate that "for individual pupils," the district may award a diploma if the students have completed "a comprehensive multi-year plan as approved by the local Board and the Commissioner of Education" (SDE, 1977, p. 62).

According to the Department of Education, multi-year plans are to be prepared for students who are unlikely, in the judgment of qualified personnel (e.g., a special education teacher), to be able to master one or more of the basic competencies prior to graduation. In the 1978-79 school year, the Commissioner requested that all superintendents identify those students in the class of 1981 who are not likely to master one or more of the competencies before graduation and submit to the State Board of Education by June 1979 the following information:

(1) the names of the students;
(2) which competencies are not expected to be mastered;
(3) what the local districts have done to diagnose the causes of the deficiency;
(4) reasons found for the deficiency;
(5) what are acceptable substitutes for the competencies--i.e., what competencies may be mastered in place of the required one(s).

To comply with this mandate, the Director of Guidance in South Burlington's high school sent a request to all mentors for the names of any freshman or sophomore students who the mentors thought would not master all the competencies by 1981, and for the competencies these students were likely to fail. Those names submitted were reviewed by the Director of Guidance, who, consulting with teachers, checked the names against those of students with individual education programs (IEPs). Students without IEPs were retested by the department chairperson and teacher in the appropriate content area. When results confirmed the initial prediction of failure, a multi-year plan was prepared for the student. The contents of the plan were determined in a conference attended by the student's parents, the mentor, the Director of Pupil Personnel, and the classroom teacher.

For those students with IEPs, special education teachers reviewed the basic competencies and developed substitute competencies for those which a student was not likely to master. In its Manual of Information and Guidelines for Teachers and Administrators, the Department of Education provides examples of "limiting handicaps"--i.e., handicaps that preclude a student from mastering a basic competency--and suggests acceptable requirements that can be substituted in place of the competency. In South Burlington, alternative requirements were incorporated into each student's multi-year plan.

All multi-year plans must be submitted to the Superintendent, to the School Board, and then to the Commissioner, and must be approved on all levels.

Program Resources and Costs

General program staffing. In South Burlington, the staff which developed the assessments consisted of the original group of 35 teachers who had worked on the State plan. Other staff includes mentors on the middle and high school levels and school administrators who are responsible for supervising the overall assessment program. Finally, guidance counselors serve as a resource for mentors to use in clarifying competencies, suggesting remedial strategies, or in soliciting remedial help from consulting teachers and classroom teachers.

Approximate costs. The workshop held in South Burlington in the summer of 1977 which helped set up the program was funded by a State grant of $4,500. No figure is available on the salary credits given to teachers for their participation. In addition, there is no estimate available for the cost of staff time in administering, scoring, and reporting assessments.

Funding sources. All funding for the South Burlington program comes from the local school budget, plus the $4,500 Title VI-D grant which underwrote the cost of the 1977 workshop.

Program Evaluation

South Burlington does not presently plan to conduct a formal evaluation, nor is an evaluation required by the State.

Future Directions

No specific modification or extension of the program is planned.

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VIRGINIA

The State of Virginia has two separate minimum competency testing programs at different grade levels. These two programs--the Graduation Competency Testing Program at the secondary level and the Basic Learning Skills Testing Program at the elementary level--have both been instituted statewide by the Virginia Board of Education in response to legislative activity of the General Assembly during the period 1976-1978 and are currently in differing phases of implementation.

The Graduation Competency Testing Program consists of basic skills tests in reading and mathematics which the State Board of Education approved for statewide use. After January 1, 1981, students must pass these tests in order to receive a high school diploma from an accredited secondary school. The State Board of Education has charged local school divisions with the responsibility of assessing the basic skills competency of secondary students in the domains of citizenship/social studies and preparation for further education and employment.

The Basic Learning Skills (BLS) Testing Program at grades 1-6 will include criterion-referenced tests in reading, mathematics, and communications arts, for annual statewide administration.

Legislative and Policy History

The two minimum competency testing programs in Virginia follow a State Board initiative and three consecutive years, 1976-1978, of legislative activity. The legislation (HB 402) enacted the current Standards of Quality (SOQ) for Public Schools in Virginia, which prescribe statewide minimum competency testing at both the secondary and elementary levels under the direction of the Department of Education.

In 1975, the Board of Education revised the SOQ for the 1976-78 biennium, and these were enacted by the General Assembly in 1976. The revised Standards call for the Board, in cooperation with local school divisions, to establish by September 1978 specific minimum statewide objectives for educational skills which students should achieve during the primary and intermediate grades in the subject areas of reading, mathematics, and communications.

The legislation further requires that, beginning in September 1978, each school division annually administer uniform statewide tests developed or approved by the Department of Education to measure student progress in achieving the specific educational objectives established by the Department in compliance with the revised Standards of Quality.

In 1977, the General Assembly enacted amendments to the 1976 SOQ which affected the implementation of statewide testing at the elementary level. Whereas the Department was still required to develop educational objectives for the elementary level in three subject areas by September 1978, the schedule for implementation of annual statewide testing was changed--to begin in September 1978 in grades 1-3, and in September 1980 at grades 4-6, to measure the progression of students *in such grades*.

Mandated statewide minimum competency testing at the secondary level was first adopted by the Virginia Department of Education in 1978. Based on changes they made in the 1976 Standards for Accrediting Secondary Schools, the Department required local school divisions to assess competencies in four domains: computational skills, functional literacy, citizenship/social studies, and preparation for further education and employment. Action of the General Assembly in 1978, however, resulted in newly revised Standards of Quality for the 1978-80 biennium and legislated (with HB 402) a minimum competency testing program at the secondary level which differed from that initially proposed by the Department.

The Standards of Quality for 1978-80 established as policy that the award of a high school diploma in Virginia after January 1, 1981 shall be based upon achievement. Such achievement was defined as completion of a number of credits and attainment of minimum competencies prescribed by the Board of Education, the latter to be identified by means of a test also prescribed by the Board. At the request of the Department of Education, the legislature again reset the schedule for implementation of BLS testing at the elementary level: grades 1-3 reading and mathematics beginning in 1978-79; grade 4 reading and mathematics beginning in 1979-80; grades 5 and 6 reading and mathematics, and grades 1-6 communications, beginning in 1980-81.

Phase of implementation. In order to receive a high school diploma, students of the classes of 1981 and 1982 must meet the statewide minimum competency requirements, which include passing the Graduation Competency Tests in reading and mathematics. Ongoing review of the program may result in new policy, which should evolve, according to the Department's timeline, by 1980.

Field-testing in Virginia of the instruments selected by the State Board (these instruments had already been field-tested by their developers prior to the Board's selection) was conducted in Spring 1978, and the initial statewide testing of the class of 1981 occurred in Fall 1978, at the beginning of their tenth-grade school year. Initial testing of the class of 1982 and retesting of a proportion of the class of 1981 took place during Spring 1979. Statewide testing of only those students who have not passed or have not taken the tests will occur in the spring of each year through 1980. In the spring of 1981, new policy is expected to go into effect, with initial testing of the class of 1983, and retesting of any students still failing being conducted.

At the elementary level, the administration of tests in reading and mathematics for grades 1-3 began with the 1978-79 school year, as legislated. During school year 1979-80, testing in reading and mathematics will begin at grades 4, 5, and 6 (testing in grades 5 and 6 is ahead of the schedule set by the SOQ). Statewide administration of tests in communications at grades 1-6 will begin in the 1980-81 school year.

Associated litigation. The Virginia Department of Education was sued by the *Richmond News Leader* in 1979 for release of the graduation competency test. The suit was won by the newspaper and the tests are now released by the Department. The Virginia General Assembly in 1979 amended the Virginia Freedom of Information Act to require release of the tests within six months of the test administrations.

Goals and Purposes

General goals. The Graduation Competency Testing Program at the high school level is to ensure that students attain minimum competence in basic skills before receiving a high school diploma. At the elementary level, the goal of the Basic Learning Skills Testing Program is to enable elementary students to acquire a mastery of the basic skills considered necessary for success in school.

Specific purposes. The secondary level program's specific purposes are to provide the means of evaluating high school students to determine whether or not they have met the graduation requirements of the Standards of Quality, and to facilitate diagnosis and remediation for students who fail to meet those standards. An analysis of test results for students at the secondary level will also assist in making revisions and improvements both in curriculum and instruction. The test results for students at the lower grade levels will provide classroom teachers with information to help them in assessing the educational needs of individual students. Disseminating test results is also a means of communicating student achievement to local communities and of encouraging community participation in local planning. (The 1978 Standards of Quality require public involvement at the local level in revising and annually extending six-year school improvement plans.)

Competencies

The statewide Graduation Competency Testing Program at the high school level assesses both school and life application skills within the domains of reading and mathematics. These specific competencies were identified by statewide committees of educators, legislators, members of the business community, and the general public. These were approved by the State Board in 1978 and are listed in Table 1. Local school divisions have the mandated responsibility for developing (or selecting) and administering some kind of assessment in citizenship/social studies and preparation for further education and employment. This assessment may include or consist only of formal testing, but local school divisions are permitted to administer non-formal methods of assessment.

At the elementary level, the Basic Learning Skills Tests assess school skills in reading, mathematics, and communications. The instructional objectives for the tests were initially written by the Division of Elementary Education within the Department of Education, then validated by the public school division personnel and representatives of institutes of higher learning, and finally approved by the Board of Education in 1977. These objectives for the three skill areas are displayed in Table 2. It is important to note that different numbers of *enabling* objectives further define, at the appropriate grade level, each of those objectives listed in the table.

In addition to the competency and basic skills tests, each school division must annually administer normative tests to groups of students selected by the Department. These tests must be developed (or selected) and scored by the Department of Education. Currently, Science Research Associates tests are being administered on a census basis in grades 4, 8, and 11.

TABLE 1

Graduation Competencies: Reading and Mathematics

Reading Skills

1) The student will locate specific information contained in printed materials. (Six performance indicators)

2) The student will read and demonstrate an understanding of written materials. (Eight performance indicators)

Mathematics

1) Read and write numerals
2) Compare numerical values
3) +, -, x, /whole numbers
4) +, -, x, /decimal fractions
5) Multiply simple fractions
6) Express percents as decimals
7) Express fractions as decimals
8) Find a given percent of a number
9) Draw conclusions from graphs
10) Determine distance from a map
11) Read tax, interest, and insurance tables
12) Know concept of parallelism and parts of circle
13) Determine perimeter and area--rectangle
14) Know measurement units, determine elapsed time
15) Solve practical problems in personal finance

TABLE 2

Minimum Statewide Educational Objectives for the Basic Learning Skills Program: Reading, Communications, Mathematics (Grades K-6)

Reading

1) The student will identify words encountered in written or oral form.

2) The student will use structural analysis and context clues to identify words.

3) The student will identify antonyms, synonyms, hononyms, and homographs, and demonstrate a knowledge of their meanings.

4) The student will identify the main idea in a reading selection.

5) The student will arrange events in sequence from a reading selection.

6) The student will classify items or events.

7) The student will predict outcomes from a reading selection.

8) The student will locate and verify factual information on who, what, when, where, or why in a reading selection.

9) The student will distinguish fact, fiction, and opinion in a reading selection.

10) The student will determine cause and effect relationships.

11) The student will determine the meaning of words from context clues.

12) The student will follow oral or written directions.

13) The student will locate information.

14) The student will organize information.

TABLE 2 (continued)

Communications

1) The student will comprehend main idea(s) and specific detail(s) of an oral communication.

2) The student will comprehend that the meaning of an oral communication is influenced by many factors.

3) The student will use correct and appropriate language.

4) The student will speak effectively in a variety of situations.

5) The student will write legibly and correctly to convey information and ideas.

Mathematics

1) The student will identify the place value of each digit in a ten-digit numeral.

2) The student will identify the relationship between two six-digit numerals as greater than, less than, or equal to.

3) The student will add two five-digit numerals with regrouping.

4) The student will subtract a five-digit numeral from a greater five-digit numeral with regrouping.

5) The student will multiply a three-digit numeral by a two-digit numeral with regrouping.

6) The student will divide a four-digit numeral by a two-digit numeral with a remainder.

7) The student will identify the relationship between two fractions (halves, thirds, fourths) as greater than, less than, or equal to.

TABLE 2 (continued)

Mathematics (continued)

8) The student will add and subtract fractions and mixed numbers.

9) The student will identify the place value of each digit in a decimal fraction, through thousandths.

10) The student will add and subtract decimal fractions, through thousandths.

11) The student will multiply and divide decimal fractions, through thousandths, by a one-digit numeral.

12) The student will demonstrate competency in measurement, using metric and customary units of measurement.

13) The student will demonstrate an understanding of geometric shapes and their properties.

14) The student will interpret line graphs, tables, and charts.

Standards and Standard Setting

Standards for the Graduation Competency Tests in reading and mathematics were established by the State Board of Education, since students must pass these tests to receive a high school diploma. Standards for the assessment in citizenship/social studies and preparation for further education and employment are the responsibility of the local education divisions.

The Virginia State Board of Education required that a cut-score be established for the statewide reading and mathematics examinations before administration of the test. The Testing Service within the Department suggested using a modification of the procedure to establish cut-scores first proposed by Richard Jaeger. Because this procedure requires field test data and no such data was available to the Department, the Testing Service proposed using the actual administration data in its stead. The State Board of Education, reacting to suggestions that such a procedure would be susceptible to manipulations to make the cut-score politically and economically palatable, required that the score be set prior to the first administration. About 100 lay persons, teachers, and supervisory staff examined the tests and recommended a cut-score of 70% for each test.

In the BLS testing program at the elementary level, the Department has set mastery of each objective at the 75% level, but certification of mastery is based upon both the difficulty of an objective and the achievement level of the student. In other words, the difficulty of an objective is defined as the mean difficulty of the test items which test that objective. Each objective is then placed on a Rasch scale by means of a simple linear transformation. To estimate the achievement level of an individual student, that student's total raw score on the test is transformed onto the same scale in such a way that, when this achievement level estimate (or Mastery Level) equals the difficulty of the objective, the student has a .75 probability of answering the items that measure the objective.

Two conditions must be met, then, in order for a student to be certified as mastering an objective on Form A of the test: (1) the objective difficulty must be equal to or less than the student's Mastery Level (2) the student must answer at least three (out of three or four) items correctly for any objective. If either condition is met without the other also being met, some kind of follow-up assessment, either formal or informal, is called for. A teacher analysis of the student's specific problems may be instituted; the student may be required to take Form B of the test, for which the mastery criterion is 5 out of 6 items correct per objective;

or, the teacher may develop additional exercises to test whatever skill(s) the student failed. (For further details, the reader is referred to Williams, 1978.)

Target Groups and Testing Schedule

Students in grades 9-12 are those targeted for assessment in the Graduation Competency Testing Program. The classes of 1981 and 1982 (all ninth- and tenth-graders) were tested during school year 1978-79. In Fall 1978, 75,000 tenth-graders were tested; 80,000 ninth-graders and tenth-graders who did not pass or take the test in the fall were tested in Spring 1979. It is anticipated that 12,000 students--only those not passing in Spring 1979--will be tested in Spring 1980. As of 1979-80, students in the classes following the class of 1982 will not be tested, since the entire program is to be evaluated before decisions are made as to the form in which the program is to continue. New policy is expected to require testing of the class of 1983 in the spring of 1981.

The BLS testing program will census-test all students in grades 1-6 annually for their progress in achieving the objectives in reading, mathematics, and communications, beginning in 1980-81. In 1978-79, students in grades 1-3 were census tested in reading and mathematics, and students in grades 1-3 and 4-6 will be census tested in reading and mathematics in 1979-80.

Test Instruments

In the Graduation Competency Testing Program, the Department currently administers the Commonwealth of Virginia Reading Test, Form 2, Secondary Level, and the Commonwealth of Virginia Graduation Competency Test--Mathematics, Form B. The former is a special edition of the IOX Basic Skill Test, Secondary Level, developed and shipped from the Instructional Objectives Exchange of California. The latter is a test developed by the Scholastic Testing Service. Both tests are criterion-referenced and were selected by an advisory committee appointed by the superintendent. It seemed to the committee that, although the reading test does not correlate directly with the State-approved competencies, it provides a closer match than other commercial tests.

In reading, 60 items test five skills, with the number of items per skill being either 10 and 20. In mathematics, 99 items test 15 competencies; there are 33 performance indicators spread among the 15 competencies and three items test each indicator. All questions are multiple-choice.

With respect to the BLS testing program, the Department contracted in 1977 with National Evaluation Systems (NES) to develop criterion-referenced tests for grades 1-3 in reading and mathematics. NES developed, for these grades, 12 items per objective, or a total of 996 items. Many of these reading and mathematics items were open-ended questions, and all were to be administered orally. The tests were field tested in the spring of 1978; final forms were prepared during the summer and in place in the fall.

In 1978, NES was contracted to develop criterion-referenced tests for grades 4-6; for these grades, then, NES developed 1440 reading and mathematics items (again 12 items per objective). Some of these items were developed for oral administration, but all were of a multiple-choice format. These tests were field-tested in the spring of 1979, will be in their final form by July, and will be in place in September. Final test Form A for all levels of the Basic Learning Skills program contains three to four items per objective, and this form functions as a test battery. Final test Form B is a test for each objective and contains six items per objective. These two forms were developed in order to allow teachers the flexibility to assess mastery of objectives by instructional unit or in a once-a-year battery.

The Department has stated that local divisions are not required to use the state Basic Learning Skills Tests. Local divisions may develop their own test(s) or use a shelf test as long as the test selected meets the requirements outlined in the Basic Learning Skills Test Manual, and receives the approval of the Department.

Test Administration

Teachers in the local districts administer the Graduation Competency Tests, but they do so according to directions provided by the Department. The Department determines the week during which tests are to be administered and directs local test directors to establish their own testing schedules within that week. The Department then supplies to the districts: instructions for school testing coordinators, instructions for test administrators, materials receipt forms, and test materials. Test security is also a responsibility of the local districts, but, again, the Department provides guidelines for maintaining security. According to the Department, test security is of concern only until the point at which the tests are released to the public.

Make-up tests *may* be scheduled through the Tuesday of the week following the testing period, but the Department leaves scheduling and administration to the local districts. In any event, the Department has mandated that makeup tests are to be administered for the purpose of determining instructional needs and *not* for certifying graduation eligibility.

Teachers also administer the Basic Learning Skills tests, making decisions, along with the principals and central office administrators, as to when to test, and whether to test by unit or battery. Divisional Directors of Testing in the local school divisions train the teachers using the Basic Learning Skills manual developed by NES for the Testing Service of the Department of Education.

Scoring and Analysis

HB 402 delegates the responsibility for test scoring to the State Department of Education. Within the Department, The Testing Service coordinates all scoring activities. This year, 1978-79 the Testing Service hired a scoring service to score the Graduation Competency Tests, but in the future, it expects to score all tests. Scores this year were computed for each student in terms of number correct and percentage correct for each skill in reading and mathematics. Summary results, which were calculated for the state as a whole and by local division, included the percentage of students passing both tests, the percentage passing only one test, and the percentage passing neither. Also included in these summaries are separate figures by sex and race. The Department releases all results as soon as possible after the test administration.

Teachers in the local divisions score all Basic Learning Skills Tests. The grade 1-3 tests are consumable--i.e., they may be scored right in the test booklets. For the level 4-6 tests, a separate answer sheet and scoring overlay are provided for a hand-scoring system; local divisions also have the option of creating their own op-scan scoring sheets to send to the contractor for scoring.

The Department has developed and implemented a scoring and interpretation system in the Basic Learning Skills Program that is based upon the Rasch model, and produces individual student profiles from test results. These profiles display the student's score (number of items correct) on each objective and the place of each objective on the scale in relation to the student's Mastery Level. (See Williams, 1978, for further detail.) The Department also asks local divisions to summarize test results in terms of the percentage of students who have mastered (1) all level K-3 objectives and (2) all level 4-6 objectives.

Reporting/Dissemination

The Department produces reports to send to local school divisions, the public, and the media about the results of the Graduation Competency Testing Program. Again, these results consist of the percentage of students by state and division who have passed both tests, only one test, or neither. Test forms are also released to the public, and student profiles become part of the students' permanent records. With respect to the Basic Learning Skills Testing Program, local school divisions are required by the state only to report the number of students who have, or have not, mastered each objective.

Use and Implications of Test Results

Consequences to students. The SOQ legislation requires that (1) "the awarding of a high school diploma shall be based upon achievement" and (2) low-achieving students shall be remediated upon identification of their needs. With respect to the graduation requirement, the legislation goes on to state that "after January 1, 1981, students shall earn the number of units of credit prescribed by the Board of Education and attain minimum competencies prescribed by the Board of Education" (HB 402). The Department, however, has to date made no provisions for what will ultimately happen to students who fail the Graduation Competency Tests. Because no funds have been appropriated to date for either the tests or other program components, the responsibility for remediation has been delegated to the local school divisions.

Consequences to programs. The major effect of the legislation on programs is to require the creation of elementary-level remedial programs at the local school divisions (utilizing BLS test results). Local divisions are entirely responsible for the development, organization, and operation of these programs.

Provisions for Special Populations

The Standards of Quality make no mention of how special populations are to be handled in either the Graduation Competency Testing Program or the Basic Learning Skills Testing Program. The Department, however, does provide guidelines for testing some special populations. In their instructions to Division Directors of Testing on the administration of Graduation Competency Tests in 1979, the Department states that "handicapped students whose IEP (Individual Education Plan) indicates a program leading to a diploma would take the test and other handicapped students would be given the option of taking the tests or not taking the tests. . . . Braille and large-type editions of the graduation competency tests will be available in the near future." The Department also allows local divisions to make their own decisions about whether or not to alter testing conditions to accommodate handicapped students, and provides guidelines for testing these students in written form.

According to the Department, students for whom English is a second language must take the regular tests under normal administrative procedures, but they may currently elect to delay taking the tests.

No other provisions for special populations are made in either the Graduation Competency Testing Program or the Basic Learning Skills Program.

Program Resources and Costs

General program staffing. The Testing Service within the Department of Education is the locus of control for both the Graduation Competency Testing Program and the Basic Learning Skills Testing Program. It is comprised of four professionals and two secretaries. The Department of Education, in cooperation with committees of educators from every part of the state and its contractor, has developed the objectives for both programs as well as the Basic Learning Skills Tests. The Board of Education approved the objectives and the Department's selection of the Graduation Competency Tests. The Testing Service has also developed the scoring and interpretation systems that are currently in use in the Basic Learning Skills Program and will be in use next year in the Graduation Competency Program.

Approximate costs. Costs to the Department in the year 1978-79 to implement the two testing programs amounted to $475,000, exclusive of departmental staff time. Of this, $96,980 was awarded to NES for developing and field-testing the Basic Learning Skills Tests in reading and mathematics for grades 1-3. The Department expects the costs of developing new materials each year to be approximately $150-200,000; for the year 1979-80, $109,618 has been awarded to NES to develop and field-test the Basic Learning Skills Tests in reading and mathematics for grades 4-6.

Funding sources. Funds at the State level were, at the inception of the program, acquired by the Department by their reordering priorities in their budget and making monies available for test development and implementation. In the year 1977-78, a specific supplemental appropriation was obtained which partially funded the Basic Learning Skills Testing Program; this appropriation was obtained again for 1978-79, and is requested for the next biennium. It is important to note, however, that the funds obtained from the legislature have never been sufficient to entirely fund the Basic Learning Skills Program; it has always been funded through a mixture of appropriated funds and monies redirected within the State budget. The Graduation Competency Testing Program has continued to be funded through monies obtained by the redirecting of State budget priorities, some of which came specifically from funds saved by the Department moving away from machine scoring. No money is budgeted at the State level for use by local school divisions.

Program Evaluation

While no explicit evaluation of the testing programs is mandated by the Standards of Quality, the Department of Education nevertheless is planning to evaluate them, both formatively and summatively. The Instructional Division of the Department is currently in charge of planning and conducting an evaluation of the Graduation Competency Program, which begins in 1979 and will span one year. The Instructional Division plans to study all aspects of the program from their inception, including such issues as the acceptance of the competencies, public reaction to the comprehensiveness and level of competency difficulty, the results and effects of the tests, and the effectiveness of the instructional services provided. The Department has also contracted with the Bureau of Educational Research at the University of Virginia to evaluate the Basic Skills Testing Program, a study which is currently underway and due to continue.

Future Directions

The present legislation and Board policy has carefully defined program parameters and directions for the next few years. Any modifications are unlikely unless the evaluation indicates such a need. To date, therefore, no changes are known or expected.

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ORANGE COUNTY, VIRGINIA

Orange County began to develop competency testing programs on its own initiative in response to a need on the part of teachers and administrators for a system of monitoring student achievement. The county first developed a reading program, designating specific objectives for each level in grades 1-8. A criterion-referenced test was created based on these objectives, using selections from the Science Research Associates item bank.

This test was later reviewed and approved by the State of Virginia and accepted for use in Orange County as the reading component of the state-mandated Basic Learning Skills Test at the elementary level. By the school year 1980-81 all elementary students will also be tested in mathematics and communications using the State's criterion-referenced tests. Competencies in science for grades K-7 are also assessed in Orange County, although it is not required by the State.

In response to the State requirement for a high school graduation competency test, Orange County developed its own Competency-Based Approach to Survival Skills. There is a high correlation between the Orange County test objectives and the State objectives in reading and mathematics, although the Orange County program assesses a wider range of competencies than required. Orange County is currently developing assessments for secondary school students in the areas of social studies/citizenship and preparation for further education and employment to comply with the state-mandated program.

Legislative and Policy History

Policy history. In 1973, Orange County instituted a middle school based on the "open classroom" concept. Since then, however, Orange County teachers and administrators have decided that they need a better system for monitoring student achievement. To achieve this goal they began to develop learning objectives for the elementary grades. Approximately 25 reading objectives were designated for each grade level for grades 1-8. The objectives included selections from the Science Research Associates (SRA) objective bank and objectives developed in Orange County. The objectives were then used as the basis for a testing program in reading for grades 1-8 in 1977. One year later the legislature of the State of Virginia mandated a statewide testing program at the elementary and secondary levels.

There are two components to the State Competency Testing Program, both of which have had impact on Orange County: (1) the Basic Learning Skills Testing Program at the elementary level, and (2) the Graduation Competency Testing Program at the secondary level. The former requires that all students in grades 1-6 take criterion-referenced tests in reading, mathematics, and communication arts on an annual basis. The latter program consists of basic skills tests in reading and mathematics which students must pass in order to receive a high school diploma from an accredited secondary school after January 1, 1981. The State Board of Education has further charged local districts with the responsibility for assessing the basic skills competency of secondary students in the domains of citizenship/social studies, and preparation for further education and employment.

The State Testing Service reviewed and approved the Orange County testing program in reading for grades 1-8. Orange County schools use this testing program in place of the reading component of the State's Basic Learning Skills Testing Program, as it tests more reading objectives. The tests are given once each spring. Orange County will use the mathematics and communications components of the State's Basic Learning Skills Testing Program.

The tests are tied to grade promotion, but the classroom teacher's assessment of the students' capabilities, reading level, and basic skills competency are also taken into account. Orange County utilizes a Modular Activity Package (MAPS) which is a hands-on assessment and instructional package for the field of science, grades K-7, with reinforcement in grade 8. Objectives for the program have been identified; tests and a management system have been developed. It has been operational for one year.

In response to the State requirement that, by 1981, students must pass a high school graduation competency test in order to receive a diploma, Orange County developed its own test. Staff from the University of Virginia, Orange County administrators and teachers, Virginia State Department of Education personnel, and parents worked to identify all the minimum basic skills in the high school curriculum, which they divided into the following categories: reading, mathematics, citizenship, health, science, and vocational education. Objectives were developed for each of these fields and included listings of competencies, indicators, and sample items for about 105 courses. Committees of University of Virginia staff and Orange County teachers developed a community survey aimed at determining whether or not the competencies listed were appropriate for minimum skills assessment. The survey results were used in the revision of competencies and related materials, which then became curriculum guides. The program is entitled Competency-Based Approach to Survival Skills. The mathematics and reading skills tested have a high correlation with the State competency test.

Phase of implementation. Orange County currently administers its own reading test annually during the spring to grades 1-8 and the State mathematics test for grades 1-3. Orange County will administer the State mathematics and communications tests for grades 1-6 when they are completed (expected dates: mathematics, grades 4-6, 1979-80 school year; and communications, grades 1-6, 1980-81 school year). Orange County's MAPS program in science has been operational in grades K-7 with reinforcement in grade 8 for one year.

Orange County has developed its own high school competency examination and curriculum guides. The test has been administered twice. Orange County is in the process of developing methods for diagnosis and remediation. The county is also still in the process of developing the secondary-level social studies basic skills test mandated by the State.

Goals and Purposes

General goals. At the elementary level, the general goal of the Orange County testing program is to monitor student progress in order to ensure that students will attain minimum competency in basic skills. At the high school level, the general goal of the testing program is to ensure that students develop good academic skills which can be applied in real-life situations.

Specific purposes. The specific purposes of the Basic Skills Testing Program at the elementary level are to:

(1) enable students in the elementary grades to acquire mastery of certain basic skills considered necessary for success in school and for a productive life in the years beyond;

(2) provide classroom teachers with information to help assess educational needs of individual students;

(3) diagnose student needs, aid in remediation and the improvement of curriculum and instruction.

The specific purposes of the Graduation Competency Program at the secondary level are to:

(1) ensure that students attain minimum competency in basic skills before receiving a diploma;

(2) provide a means of evaluation by which students can fulfill the testing component of the State graduation requirements;

(3) facilitate diagnosis, reevaluation, and curriculum modification.

Competencies

In Orange County, students at the elementary level are assessed for competency in reading using the Orange County test. Approximately 25 reading objectives are assessed at each grade level for grades 1-8. Teachers organized the objectives, using selections from the SRA objective bank and objectives they developed.

Orange County also uses a hands-on assessment for competency in science using the MAPS program for grades K-7 (with reinforcement in grade 8). The program evolved as part of the comprehensive ecology program in Orange County. The objectives and test questions were developed by staff. The taxonomic levels of the skills are repeated at each grade level, although the activities differ.

Students in grades 1-6 are assessed for competency in mathematics The mathematics test contains 12 items for each of 83 objectives. A social studies test for grades 1-6 is under development.

Orange County secondary students are assessed for competency in basic skills in the high school curriculum areas of reading, mathematics, citizenship, health, science, and vocational education. Working with University of Virginia staff, the Virginia State Department of Education, Orange County staff and teachers identified the minimum basic skills in the high school curriculum in the categories mentioned above. They developed objectives and listed competencies, indicators, and sample items for about 105 courses. Committees consisting of Orange County educators and

University of Virginia staff developed a survey which was mailed to various parts of the community and business community. The survey sought to determine whether or not the competencies listed were appropriate for minimum skills assessment, whether the objectives and items were keyed properly, and whether there were any gaps in the competencies. The committee reviewed the survey results and teachers revised the materials, which then became curriculum guides containing pretests and posttests to indicate what students had learned from an instructional unit. The program is entitled Competency-Based Approach to Survival Skills. Orange County developed the reading component of the test by breaking down the 35 different life skills from the State test into very specific skills which are measured by three items per skill.

Standards and Standard Setting

The Orange County testing program in reading for grades 1-8 assessed approximately 25 objectives at each grade level. The standard for mastery of an objective is either two out of three items per objective or three out of four items per objective, depending upon the objective being assessed. The State Department of Education has set mastery of each objective in the basic life skills testing program at the 75% level, but also takes the difficulty of the objective and ability of the student into account. The test influences grades, but the teacher's sense of the student's capabilities and reading level is also considered.

There was no specific means of evaluating students using the MAPS program in science for grades 1-7. Therefore, local staff developed the objectives and test questions. Skills are reinforced in grade 8.

Standards for the Graduation Competency Test in reading and mathematics have been established by the State Board of Education, as students are required to pass these tests in order to receive a high school diploma. Orange County is presently in the process of establishing standards for social studies and further education for employment. A passing score of 70% has been set by the State for the reading and mathematics tests.

Target Groups and Testing Schedule

Orange County currently tests students in reading in grades 1-8 and in science in grades K-7. The reading test is given each spring. The

MAPS program in science allows for ongoing assessment. Orange County uses the State mathematics test for grades 1-3 annually. The State mathematics test for grades 4-6 is scheduled for completion during the 1979-80 school year.

The State has mandated testing in grades 9-12 in reading, mathematics, social studies, and preparation for further education and employment. Orange County has not completed its test for social studies and for preparation for further education and employment. The classes of 1981 (tenth-graders) and 1982 (ninth-graders) were tested in reading and mathematics during the 1978-79 school year. Only those students who did not pass will be tested in the spring of 1980. Subsequent testing will be conducted in the spring of the students' tenth-grade year resuming in March 1981.

Test Instruments

Orange County uses its own reading test for grades 1-8. Students are assessed on approximately 25 objectives at each grade level. Teachers in Orange County developed the objectives, which include selections from the SRA objective bank. Test items were both written by teachers and drawn from the SRA item bank.

Orange County's MAPS program for science consists of objectives and test questions written by staff and includes a considerable amount of manipulatives. In each grade, the taxonomic levels of the skills are repeated.

Orange County uses the State's Basic Learning Skills mathematics component. The State Department of Education contracted with National Evaluation Systems, Inc. (NES) for the development of the criterion-referenced test. For a more complete description of the test please see Minimum Competency Testing for the State of Virginia (NES, 1979).

Orange County developed its own Graduation Competency Program for high school students in response to the 1976 mandate of the State legislature. The test was developed by Orange County staff and teachers in cooperation with staff from the University of Virginia. In the judgment of the test developers, the competency program should include a program of continuing instruction throughout high school. Thus, they worked to identify the minimum basic skills in the high school curriculum, which was divided into the categories of reading, mathematics, citizenship, health, science, and vocational education. Objectives for each of these different fields were developed, as well as competencies, indicators, and sample test items for 105 courses. Reading and mathematics are the only two areas assessed by county-wide tests, and for each of these, the test consists of three items for each of 35 objectives. Therefore, the reading and mathematics tests are each 105 items long and are administered for primarily diagnostic purposes. Orange County expects teachers to develop their own competency-based tests for the other areas.

Committees of Orange County and University of Virginia staff were established to develop a survey for the purpose of evaluating the competencies in terms of their appropriateness for minimum skills assessment. The surveys were mailed to members of the lay community and business community. Twelve meetings were held by the committees to review the survey results, after which teachers revised the materials which then became curriculum guides. The county has also developed a high school mathematics test. There is a high correlation between skills in the Orange County mathematics and reading tests and those on the state-developed tests.

Test Administration

All the tests at the elementary and secondary levels are administered by Orange County teachers. The Orange County reading test for grades 1-8 is given each spring. The MAPS program involves ongoing assessment at the completion of each module. The State mathematics tests for grades 1-6 is given annually at a time determined by the county.

The Graduation Competency Test at the secondary level is given at a time determined by the State Department of Education. Test security is a concern until the tests are released to the public.

Scoring and Analysis

Orange County hired SRA to score the Basic Learning Skills tests for the elementary level in the first year of administration. In the spring of 1979, CETA aides were hired to score the tests. These tests are criterion-referenced and are scored in terms of mastery of each objective. The scores are interpreted according to a system based on the Rasch model. Individual student profiles are produced from the test results; the profiles display the number of items correct on each objective and the place of each objective on the scale in relation to the student's mastery level.

Testing for the MAPS program in science is a direct, hands-on assessment which is undertaken by the classroom teacher.

During 1978-79, the Testing Service of the State Department of Education hired a scoring service to score the Graduation Competency Tests at the secondary level. In the future, the Testing Service plans to score the tests. Scores for 1978-79 were calculated for each student in terms of the number correct and the percentage for each skill tested. Summary results were compiled for Orange County and included the percentage of students passing both the reading and mathematics tests, passing one test, and passing neither. The summary also included this information separated by sex and by race.

Reporting/Dissemination

Most of the data collected in Orange County as a result of tests are transmitted directly to teachers for purposes of diagnosis, remediation, and curriculum modification. At the elementary level, the Basic Learning Skills tests (the Orange County reading test and the State mathematics test) include student profile reports for the classroom teacher which become part of the student's permanent record. Parents are sent a letter at the end of the first semester if their child's performance is unsatisfactory. Two more letters on student progress are sent to parents prior to any determination to retain rather than promote the student. Orange County is required to report to the State the number of students who have, or have not, mastered each objective.

At the secondary level, the State reports the results of the Graduation Competency Test to Orange County, the public, and the media.

Use and Implications of Test Results

Consequences to students. Orange County considers the results of the Basic Learning Skills test at the elementary level when deciding grade promotion. However, teacher evaluation of the student's capabilities and reading level are also considered. As the tests are criterion-referenced and as student profiles are provided to the teacher, test results clearly demonstrate the student's weaknesses and strengths in terms of the test objectives. This information affects the instructional program designed for each student.

Students who fail the Orange County Competency-Based Approach to Survival Skills Test are to take mathematics or English lab as an elective. They will receive credit for these electives, but the courses are to be taken in addition to their regular courses. Diagnostic information from the test is given to mathematics and reading teachers. The student who fails is given another opportunity to take the test. The results of the test also influence decisions regarding promotion and graduation.

Consequences to programs. Orange County uses the results from all the testing programs for curriculum modification and development. Information from the tests is used diagnostically by the teachers in designing individual instructional programs. Remedial programs are required for students who do not pass the tests.

Provisions for Special Populations

The State allows the local districts to decide on provisions and accommodations for special populations. Special education teachers administer tests to students who are mainstreamed and who are considered capable of passing. In the High School Graduation Competency Testing Program, a special education student who participates in regular classes must take the same test as other students unless the Individual Education Program (IEP) stipulates otherwise. However, special education students are not expected to master all of the competencies; expectations of performance are specified on an individual basis in the IEP. Those special education students who are enrolled in self-contained special education classes are not required to take the competency tests. Both of these groups, however, receive a certificate of program completion rather than a standard diploma.

Program Resources and Costs

General program staffing. Orange County uses its own staff and teachers in program development, administration, and evaluation. Additional staff was hired to score the tests (see "Scoring and Analysis").

The Competency-Based Approach to Survival Skills employed the principal as director in developing the materials and the assistant principal as coordinator within the district. Seven teachers were given extra responsibility as group leaders in the administration of the program and for supervision within the classroom to determine the content of teacher lessons, plans, and teaching methods.

Approximate costs. At the elementary level in Orange County, funds were used to: (1) provide released time one afternoon per week for classroom teachers to determine reading objectives and create skill packs, (2) produce the Orange County reading test and the MAPS testing program in science, (3) pay SRA for some reading objectives and test items, (4) hire SRA to score the tests the first year, and (5) hire aides through the CETA program at a cost of $1,200 to score the tests during the spring of 1979.

At the secondary level for the Competency-Based Approach to Survival Skills Program, Orange County used funds to: (1) pay seven teachers/group leaders $300 apiece in addition to their salary, (2) pay those teachers involved in curriculum development $800 apiece in addition to their salary, (3) produce the materials and curriculum guides that make up the program.

Funding sources. The sum of $41,000 from Title I money has been provided for the development of remediation labs. Orange County has also received a Title IVC grant which provided $33,000 in 1978-79 and $98,000 in 1979-80; a sum for 1980-81 is yet to be negotiated.

Program Evaluation

Orange County staff, with the help of faculty from the University of Virginia, are in the process of developing a plan to evaluate the Orange County program. This is a local effort, independent of State initiation, and details of the evaluation are not yet available.

Future Directions

Orange County is still in the process of developing a social studies curriculum and test for grades 1-6, a social studies/citizenship assessment of secondary school students, and an assessment of secondary students in the domain of preparation for further education and employment. Development and implementation of remediation labs will be completed by 1979-80. An evaluation of the high school testing program is scheduled to take place in 1980.

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KANAWHA COUNTY, WEST VIRGINIA

In June of 1977, the Kanawha County Board of Education mandated high school competency testing. While the State of West Virginia had already instituted a norm-referenced basic skills assessment for the elementary grades, a criterion-referenced interpretation of the elementary-level basic skills test results and the high school testing program were initiated entirely on the decision of the Kanawha County Board of Education. The Board's goals are to improve instruction at all levels and to bring greater credence to the high school diploma by ensuring that students have achieved basic skills.

At the elementary level, students in grades 3, 6, and 9 participate in the statewide assessment program, which tests for basic skills achievement with the Comprehensive Test of Basic Skills (CTBS). Kanawha County then utilizes its own criterion-referenced interpretations of these results in order to help screen students for potential basic skills deficiencies.

At the high school level, tests in reading and mathematics will be administered to tenth-grade students for the first time in October 1979. The tests are based on school skills with life-role applications. Acting upon the recommendations of an appointed Steering Committee and several subcommittees, the Board adopted the competencies selected for testing, mandated the test, and determined the passing score. The schools within the county are responsible for administering the tests, reporting scores to parents, maintaining student records, and designing remedial programs for students who fail the tests. Although students' scores become part of their permanent records and those who fail must retake the tests prior to graduation, passing the tests is not a requirement for a high school diploma.

Legislative and Policy History

Policy history. In the State of West Virginia, only a norm-referenced basic skills assessment is required on a statewide basis. Local districts, at their own discretion, may institute competency testing. On February 26, 1976, the Kanawha County Board of Education unanimously passed a motion asking the administration to study standards of achievement and the possibility of awarding different kinds of diplomas.

The study was prompted in part by public concern over the reports issued by the American College Testing Program and the College Entrance Examination Board: these reports indicated a steady national decline in students' overall performance on the tests in question. The business community was also concerned about reports of students who lacked the basic skills necessary for employment.

Another impetus for the Board's motion was a debate which centered on the wide discrepancy between achievement levels of special education students as indicated by their grade-point averages and the lower grade-point averages on the permanent records of students enrolled in regular classes who, in fact, may have achieved higher levels of skill. As a result of this controversy, the Board charged the local educational administration with studying more equitable means of reporting student skill levels.

The decision to study standards of achievement and a variety of diplomas was made strictly at the local level. While the results from the West Virginia State Testing Program (WVSTP) during the five-year period of 1972-77 did not show a decline in student achievement levels, the Board thought that public concern over competency levels warranted a study of the competency of Kanawha County graduating seniors. In a pilot study conducted in the spring of 1976, criterion-referenced tests in reading and mathematics were administered to a sample population of twelfth-grade students. The study showed:

(1) Graduating seniors demonstrated acceptable performance in all areas of reading.

(2) Proficiency in reading exceeded proficiency in mathematics.

(3) As the complexity of computational skills increased, proficiency decreased. That is, while students could add, subtract, and multiply, many have difficulty with fractions, decimals, and percents. (Candor-Chandler, 1978, p. 2).

In fall 1976, a Steering Committee was named by the Kanawha County Board of Education to study alternate approaches to reporting student achievement levels, with the goal of recommending a model best suited to the needs of Kanawha County. A nine-member Steering Committee was formed including elementary, junior, and senior high school principals, and Central Education Office representatives. After several meetings, the Steering Committee decided that more diversified representation was needed for the study, and three subcommittees were formed to facilitate the process: (1) the Subcommittee for Exceptional Children, composed of special educators, representatives of various advocacy groups for these students, and parents; (2) the Subcommittee for Community Expectations, made up solely of major employers in the area; and (3) the Subject Area Subcommittee, with representatives of students, teachers, curriculum specialists, and faculty from the local colleges.

After analyzing different models legislated or planned by various states or communities, the Steering Committee, acting upon the recommendations of the subcommittees, developed a list of constraints and restrictions to which the model adopted for high school graduation requirements must conform. In essence, the Steering Committee's recommendation to the Board was that a range of skills in reading and mathematics be developed which would allow both the more able and the less able students to work toward the achievement of a number of competencies. In addition to diplomas, all graduates would receive competency certificates indicating the skills that each had mastered. Certificates of competency were to be awarded to all students taking the competency tests, whether or not the diploma requirements were met. The model unanimously adopted by the Kanawha County Board of Education in June 1977 included competencies only in reading and mathematics; recommendations were made for expansion to communications and other areas of concern in the future.

Simultaneous with their adoption of the high school competency testing program, the Board elected to use criterion-referenced interpretations of the state-administered CTBS, given in grades 3, 6, and 9. The Board reasoned that, since students are not given an opportunity to pass the high school competency test until grade 10, this interpretation of earlier test results might help to screen students for potential basic skills deficiencies. Another advantage of reinterpreting the results of the required tests is that the amount of testing in the local schools does not have to be increased.

Phase of implementation. The Board mandated that students of the graduating class of 1982 be required to take competency tests in reading and mathematics during October of the tenth-grade year. Consequently, Kanawha County's first high school competency test will be given to tenth-grade students in October 1979.

Goals and Purposes

The primary goal of the high school testing program is to bring more credence to the graduation diploma by measuring and recording the degree to which students have achieved basic reading and mathematics skills. Although the test results become a part of each student's record, attainment of a passing score is not a requirement for graduation. The major purpose of using a criterion-referenced model for interpreting CTBS results at the elementary and junior high school levels is to screen students for possible deficiencies in basic skills prior to the high school competency test.

Secondary goals of the overall program include: (1) the improvement of basic skills instruction in the primary grades and reinforcement of the basic skills in the middle and secondary grades, and (2) the analysis of school programs during the process of improvement.

Competencies

One of the primary conclusions of the Board, based upon the study conducted by the Steering Committee and the subcommittees, was to develop a competency program which would require as little change as possible in the existing curriculum. The intention was to improve the curriculum by building upon the existing foundation rather than to redesign the system.

The Board, the committees, and professionals who constructed the high school competency test chose to measure those school skills which have a strong life-role application. The selection of these competencies satisfied two criteria of the Board's motion. First, the school skill base would ensure that, to a great extent, curriculum for instruction would be in place and would need minimal modification to incorporate life skill applications. Second, the life skill application would be in accord with community expectations that students should acquire the basic skills in order to use them in life situations.

Competencies with both a school skill base and a life skill application were developed for reading and mathematics. The Steering Committee, acting upon the recommendation of the subcommittees for Exceptional Children, Community Expectations, and Subject Area, recommended the competency areas of reading and mathematics to the Board. Once the Board adopted these as the competency areas to be tested, then the Steering Committee and the subcommittees further defined the competencies to be tested in each competency area. The committees developed the competencies on a continuum ranging from basic skills to the more complex competencies. In this way, realistic goals could be set for special education students which would enable them to participate in the program.

The Steering Committee and the three subcommittees based the high school test competencies on extensive instructional packages which Kanawha County had previously developed, so that the existing curriculum did not have to be modified to fit with the test. Table 1 presents the list of competencies adopted for each competency area.

Standards and Standard Setting

After an analysis of the field test data in May 1979, a representative group of parents, teachers, counselors, principals, and Central Office administrators used the Angoff method to determine expected performance levels for the high school competency tests; a passing score will be determined for each subtest in Reading and Mathematics using a combination of the empirical results from the field test and the data from the Angoff procedures. Students must pass every subtest in order to complete the competency requirements. A student who has failed any part(s) of the tenth-grade test on its first administration must retake the appropriate subtest(s) in subsequent years.

At the elementary level, a 60% cutoff score has been set on selected sets of reading and mathematics items on the CTBS for each grade level. In order to use the CTBS as a screening device to identify students with basic skill deficiencies, certain reading and mathematics items on the CTBS were identified as measuring essential competencies. New scores are then generated for each student only on the basis of these objective-referenced items. A student who scores 60% or above is classified as "generally competent," or skilled; one who scores below 60% is classified as "incompetent," or unskilled.

TABLE 1

Reading and Mathematics Competency Subtests in Kanawha County, West Virginia

Mathematics Subtests

1) Addition and subtraction of whole numbers
2) Multiplication and division of whole numbers
3) Fractions
4) Decimals and percents
5) Measurement and informal geometry (time, maps and charts, distance, weight, and area)
6) Consumer applications (unit pricing, the commission on a sale, and determining wages)

Reading Subtests

1) Functional reading (including minimum reading skills necessary to function as an adult in society)
2) Functional vocabulary (vocabulary encountered in the real world, from fields such as education, law, medicine, and business)
3) Mass communication skills (reading printed mass media such as newspapers and magazines, interpreting ads, and ordering from a catalog)
4) Reading comprehension (which includes a wide variety of literature)

Target Groups and Testing Schedule

The Board requires all tenth-graders to take the high school competency test. Students who do not pass any subtest, or portion of the test in the tenth grade will be required to retake those portions in subsequent years. Students will have at least one opportunity per year to retake the test, and it is mandatory that students who have failed the test, retake it at least in the twelfth grade.

The Board mandated that the graduating class of 1982 will be the first required to take competency tests in reading and mathematics. Students will take the test in October of their tenth-grade year. Thus, Kanawha County's first high school test will be given to all tenth-graders in October 1979.

The CTBS, which is administered by the State, is given to all students in grades 3, 6, and 9.

Test Instruments

After the high school competencies were identified by the Steering Committee and the subcommittees, test specifications were developed by local school teachers; a consultant from Educational Testing Service (ETS) provided assistance on measurement issues and test development.

In February 1978, the Kanawha County Board of Education Office of Research and Evaluation organized a conference and coordinated test development activities. From a pool of applicants, one reading/language arts teacher and one mathematics teacher from each of the 11 schools in Kanawha County were selected as participants. The consultant from ETS reviewed the test specifications, trained the teachers to write the items, and then reviewed all items that were written.

Again, it is important to note that, because the Board and the Steering Committee believed that the existing curriculum could properly prepare students for competency testing, it was the curriculum of the school system which shaped the competency tests rather than the reverse. Existing curriculum guides or programs of study were utilized in the development of both the competencies and test specifications to assure a match between the competency requirements and the curriculum.

The items were field-tested in May 1978. A random sample of approximately 100-200 students responded to each item. Two consultants then reviewed the items in conjunction with the pilot data. Items which did not meet standard psychometric criteria and therefore deemed unacceptable were replaced or edited. All of the new items and corrected items were field-tested in the fall of 1978. A total of 600 reading items and 540 mathematics items resulted from this process.

Items were then assigned to three reading forms and four mathematics forms, which were matched by content specifications and by item difficulty. Although the tests are competency-based, they are not strictly objective-referenced, in that the items were clustered by competency. This method was used because it was considered that some objective-referenced tests have too many items which measure an insignificant objective.

The tests utilize a paper-and-pencil format, and each subtest contains approximately 20-35 multiple-choice items. The tests are power tests, not timed tests.

The field test of the final test forms was conducted in May 1979. A typical school was selected for the field-testing--i.e., the school matched the county means in both reading and mathematics and could still provide the necessary information on the black population. After this field test, a group from the Human Rights Commission reviewed the test items for bias.

At the elementary level, while all students in the specified grades are required to take the CTBS in its entirety, only a certain subset of test items is employed for the criterion-referenced interpretation. In order to select these items, teams of mathematics and reading teachers at each level analyzed every CTBS test item in their respective subject areas to determine whether the item related to current curriculum and measured essential competencies--i.e., those skills students should master before advancing to the next level. Consensus was necessary for the selection of a particular item.

A subtest of 35-40 items each for reading and mathematics was selected for each of the grades. These items are the basis for generating individual student scores in order to identify students with skill deficiencies.

Test Administration

Tests are administered by local school teachers; Central Office staff are responsible for test security, dissemination of tests, and data collection control. One monitor per school site is appointed from the Central Office staff to distribute and collect all materials.

Scoring and Analysis

Scoring and analysis of the high school competency test has, thus far, been done by the Central Office computer. Total test scores for reading and mathematics, and scores for each of the mathematics and reading subtests are generated for each student.

Although the scoring of the CTBS is conducted by an outside agency for the State, the criterion-referenced interpretation is done at the local level. Scores for the specified sets of mathematics and reading items are produced for each student.

Reporting/Dissemination

High school competency test results become part of the student's permanent record and are sent to the student's parents. With the permission of students over 18 or of the parents of students below the age of 18, these records may be made available to colleges or prospective employers upon request.

The norm-referenced interpretations of the CTBS, which are provided by the State, are reported in terms of percentile scores by classroom, school, and district, as well as for the State. Criterion-referenced interpretations, by contrast, are reported only in terms of a total score on the specified items for individual students. Parents whose children fail to meet the basic skills standards are notified of that fact.

Use and Implications of Test Results

Consequences to students. Students who fail the high school competency test are required to retake the failed subtests once a year until they graduate. Passing the test is not, however, a requirement for graduation. Rather, certificates of competency are awarded to all students indicating which specific competency subtests have been passed.

The criterion-referenced CTBS results are used for screening purposes to identify students with skill deficiencies. Student progress in basic skill achievement is thereby monitored, and the teachers of students with skill deficiencies may decide upon appropriate remediation or instruction on a case-by-case basis.

Consequences to programs. The Board provides funds with which each secondary school in Kanawaha County can design its own plans for helping students who do not meet the basic skills requirement. Schools are encouraged to develop their own alternative remediation plans, such as in-service training for teachers, parent workshops, or programs to improve school attendance. There is also a summer school program in which students can participate to increase their basic skills achievement, and a new volunteer tutor program designed to provide individual attention.

Provisions for Special Populations

Procedures for dealing with special population students have not yet been fully specified. Since students fulfill the competency requirement by competency subtest, students with special needs may be permitted to take only as much of the test as is appropriate for their needs. Provisions for alternate methods of competency verification are under development, and a waiver of the requirements may be granted in some cases. Physically handicapped students, for example, who are unable to complete traditional paper-and-pencil tests, may be permitted to demonstrate skill proficiency in other ways. In addition, development of the tests in Braille and large type is also anticipated.

Program Resources and Costs

General program staffing. The Research and Evaluation staff of the county educational administration manages the program. The staff consists of a director, a coordinator, and two secretaries. Local schools are charged by the Board with developing and conducting their own remediation programs.

Appropriate costs and funding sources. Costs for test development, consultant fees, and the conferences in item-writer training and item development amounted to approximately $3,500. These costs were assumed by the educational administration of Kanawha County, although the annual operating budget was not increased. It was decided that the program should build upon existing curriculum and testing procedures in order to keep the costs of program development down.

Program Evaluation

No formal evaluation of Kanawha County's program has taken place to date, and none is anticipated.

Future Directions

After development of the reading and mathematics components of the high school competency test is completed, the County Board is interested in developing tests in communication. In addition, the administration would like to develop its own computer programs in order to facilitate access to the item bank.

References

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